FINAL

Revised PM_{10} State Implementation Plan for the Salt River Area

Additional Submittals

(Maricopa County Rule 310.01
Maricopa Dust Control Permit and Guidance for Application for Dust Control Permit)

AIR QUALITY DIVISION
ARIZONA DEPARTMENT OF
ENVIRONMENTAL QUALITY

September 2005
(Additional Submittal in November 2005)

Maricopa County
Air Quality Department

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August 5, 2005

Stephen A. Owens
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Mr. Owens:

Enclosed is a final State Implementation Plan revision package for amendments to the Maricopa County Air Pollution Control Regulations consistent with A.R.S. §49-479 and 40 CFR 51. The enclosed amendments concern the following:

Rule 310.01 – Fugitive Dust From Open Areas,
Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways

We are submitting this package to the Arizona Department Of Environmental Quality as an official revision to the Arizona State Implementation Plan.

Thank you for your cooperation and consideration in this matter. If you have any questions, please contact Jo Crumbaker, Manager-Planning & Analysis Division, at 602-506-6705.

Sincerely,

Robert Kard, Director

cc: Julie Rose, EPA
Wienke Tax, EPA
Wayne Nastri, EPA
Andrew Steckel, EPA
Colleen McKaughan, EPA
Nancy Wrona, ADEQ

State Implementation Plan Revision Package

Revisions To The
Maricopa County Air Pollution Control Regulations

Rule 310.01 – Fugitive Dust From Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways

Prepared By
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Completeness Checklist

Completeness Checklist

1. Agency: Maricopa County Air Quality Department

2. Submitted Rule:

Number	Title	Adoption Date
310.01	Fugitive Dust From Open Areas,	06/19/99
	Vacant Lots, Unpaved Parking Lots,	02/16/00
	And Unpaved Roadways	02/17/05

3. EPA Analogous Approved Rule (Applicable SIP):

The EPA analogous approved rule is Rule 310.01, which was adopted on February 16, 2000, submitted to the EPA on March 2, 2000, and published in the Federal Register on July 25, 2002 (67 FR 48718).

4. State/District Authority For Adoption/Implementation:

A.R.S. §49-479.

5. Pollutants Regulated By Rule:

PM ✓, SO_X___, VOC___, NOx___, CO___, Pb___

6. Identification Of Sources By Name Or Number/Location (City, County, Or District) Area's Attainment And Plan Status (Group By Size/Subcategory, If Necessary):

Rule 310.01 limits the emission of PM_{10} into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways that are not regulated by Rule 310 (Fugitive Dust) of the Maricopa County Air Pollution Control Regulations and that do not require a permit nor a Dust Control Plan.

PM_{10} Classification:	Serious (As Of June 1996)
Carbon Monoxide Classification:	Attainment (As Of April 8, 2005)
1-Hour Ozone Classification:	Serious (As Of February 1998)[1]
8-Hour Ozone Classification:	Basic (As Of April 15, 2004)

[1]On May 16, 2001, the EPA finalized its finding of attainment for the Phoenix area for the 1-hour national air quality standard for ground-level ozone. The EPA has not yet re-designated the area to attainment with the 1-hour ozone standard. Arizona must first submit an air quality maintenance plan showing how the Phoenix area will maintain the 1-hour ozone standard for 10 years.

7. Summary Of Rule/Rule Changes:

Maricopa County adopted Rule 310.01 in June 1999 and revised Rule 310.01 in February 2000, in order to make Rule 310.01 approvable to the Environmental Protection Agency as a replacement to the Federal Implementation Plan and so that Rule 310.01 could be incorporated into the State Implementation Plan. In February 2005, Maricopa County revised Rule 310.01 to address commitments proposed in the Salt River PM_{10} State Implementation Plan Revision. The purpose of the Salt River PM_{10} State Implementation Plan Revision is to meet the Environmental Protection Agency's requirements to implement control measures committed to in the Salt River Plan and to demonstrate attainment of the 24-hour federal standard for coarse particulate matter air pollution by December 31, 2006 in the Salt River Study Area. The Environmental Protection Agency requires that control measures applied to significant sources of PM_{10} emissions in the Salt River Study Area be applied to similar sources throughout the Maricopa County serious PM_{10} nonattainment area. The February 2005 revisions to Rule 310.01 meet such requirements.

8. Rule's Effect On Emissions:

According to the Final Revised PM_{10} State Implementation Plan For The Salt River Area dated August 2004, open areas, vacant lots, unpaved parking lots, and unpaved roadways exceed the significance threshold of 5 $\mu g/m^3$; therefore, require Best Available Control Measures (BACM) and Most Stringent Measures (MSM).

The alluvial channel of the Salt River is mostly dry and contains loose soil due to disturbances from wind erosion and vehicular trespass. PM_{10} emissions, in 2002, from open areas and vacant lots in the Salt River PM_{10} Study Area were estimated to be 17.7 metric tons/day for open areas and 21.3 metric tons/day for vacant lots. This daily emission rate is based on PM_{10} emissions due to wind erosion on high wind days and a control measure efficiency of 55% for Rule 310.01.

For 2006, PM_{10} emissions from open areas and vacant lots in the Salt River PM_{10} Study Area were estimated to be 9.8 metric tons/day for open areas and 11.8 metric tons/day for vacant lots. The daily emission rates are based on PM_{10} emissions due to wind erosion on high wind days and an increased control measure efficiency from 55% to 71% for Rule 310.01. The projected reduction in PM_{10} emissions results from not only the better enforcement of Rule 310.01 but also from the conversion of open areas and vacant lots to residential and commercial uses. Converted land has lower windblown PM_{10} emissions due to stabilization of the soil from landscaping, paving, and the buildings themselves. Based on the Maricopa County's Rule Effectiveness Study and the Clark County, Nevada PM_{10} State Implementation Plan, emission reduction percentages that could be achieved assuming that Maricopa County hires additional inspectors to strengthen the enforcement of Rule 310.01 for open areas and vacant lots can be expressed as 80% rule effectiveness.

For 2002, PM_{10} emissions from the alluvial channel were estimated to be 9.8 metric tons/day due to wind erosion on high wind days. This baseline estimate is based on the assumption that there was no enforcement of Rule 310.01 in that portion of the alluvial channel. For 2006, PM_{10} emissions from the alluvial channel were estimated to range from 2.8 to 7.5 metric tons/day depending upon the types of control measures that may be implemented. Based on Maricopa County's Rule Effectiveness Study and the Clark County, Nevada PM_{10} State Implementation Plan, the emissions reductions percentages can be achieved, assuming that Maricopa County hires additional inspectors to strengthen enforcement of Rule 310.01 for open areas and vacant lots.

For the majority of the control measures for open areas, vacant lots, and the alluvial channel to remain effective, vehicular trespassing must be minimized through the use of barriers to trespassing. Otherwise, vehicular traffic will destroy/disturb vegetative cover and the other surface treatments used to stabilize the soil, including the installation of wind breaks.

9. Demonstration That NAAQS/PSD Increments/RFP Demonstration Are Protected (As Appropriate):

Rule 310.01 strengthens the State Implementation Plan by limiting the amount of PM_{10} emitted from open areas, vacant lots, unpaved parking lots, and unpaved roadways. With the amendments in 2005, Rule 310.01 addresses commitments proposed in the Salt River PM_{10} State Implementation Plan Revision. The purpose of the Salt River PM_{10} State Implementation Plan Revision is to meet the Environmental Protection Agency's requirements to implement control measures committed to in the Salt River Plan and to demonstrate attainment of the 24-hour federal standard for coarse particulate matter air pollution by December 31, 2006 in the Salt River Study Area. The Environmental Protection Agency requires that control measures applied to significant sources of PM_{10} emissions in the Salt River Study Area be applied to similar sources throughout the Maricopa County serious PM_{10} nonattainment area.

10. Modeling Information Used To Support Rule Revision:

The base year emissions inventory for the Final Revised PM_{10} State Implementation Plan For The Salt River Area dated August 2004 was developed as a result of an extensive field study

conducted between June 1, 2002 and December 31, 2002. The study focused on identifying the locations of activities in the Salt River Study Area that generate fugitive dust. Satellite image analysis and observation of the Salt River Study Area resulted in the identification of the following general categories of PM_{10} emissions sources, which were subsequently input into the Arizona Department Of Environmental Quality's GRIDTEST emissions model for the development of source hourly emissions by grid: agricultural land, alluvial channels, construction areas, miscellaneous disturbed areas or open areas, paved primary roads, paved parking lots, paved secondary roads, unpaved roads, unpaved road shoulders, unpaved parking lots, surface mining, and vacant lots.

A satellite image of the Salt River Study Area with an overlay of the general categories of PM_{10} emissions sources was developed. Between June 1, 2002 and December 31, 2002, the Arizona Department Of Environmental Quality and Maricopa County conducted observations of the locations and activities within the Salt River Study Area associated with noted occurrences of fugitive dust. Although these observations did not constitute a comprehensive survey of land use in the study area, they provided a method of documenting area incidents of fugitive dust. These observations were superimposed on a satellite map of the Salt River Study Area, reviewed by teams of observers from the Arizona Department Of Environmental Quality, and grouped into the following 12 emission categories for further analysis: (1) agriculture (including all general agricultural activities), (2) earthmoving (including general activities associated with construction), (3) trackout (including soil or bulk material on a paved street surface), (4) material handling (including vehicle traffic on dirt or gravel roads at construction, industrial, or commercial sites), (5) diesel exhaust (including exhaust from internal combustion engines that use diesel as fuel), (6) wind event (including airborne dust due to wind movement), (7) unpaved hauling (including vehicle traffic on dirt or gravel roads at construction, industrial, or commercial sites), (8) process equipment (including mechanical equipment used to produce a product or to perform a specific function that produces airborne dust), (9) unpaved parking (including vehicle traffic eon unpaved parking areas), (10) burning (including open burning), (11) street work (including activities associated with street maintenance), and (12) other (a general category used to describe airborne dust not attributable to a specific fugitive dust source or sources.

11. Evidence That Emissions Limitations Are Based On Continuous Emission Reduction Technology, Add-On Controls, Reformulated Materials, And/Or Industrial/Process Equipment Designs:

On July 25, 2002, the Environmental Protection Agency approved the Maricopa Serious PM_{10} Nonattainment Area and granted Arizona's request, in accordance with CAA §188(e), to extend the Clean Air Act deadline for attainment of the annual and 24-hour PM_{10} standards from December 31, 2001 to December 31, 2006 (67 FR 48718). Because the attainment deadline for this plan revision is also December 31, 2006 and the measures must be applied to all similar sources throughout the Phoenix nonattainment area (see 67 FR 44369, July 2, 2002), the control strategies must meet the "Most Stringent Measures" test, as well as the "Best Available Control Measures/Technology" test.

In its July 25, 2002 approval of the Maricopa County Plan, the Environmental Protection Agency defined "most stringent measures" (MSMs) as the most stringent measures included in any state implementation plan, or being implemented in any state, that are economically and technologically feasible for the nonattainment area in question. "Best Available Control Measures" (BACM) must be applied in serious nonattainment areas, also taking into account the economic and technological feasibility of each measure.

BACM and MSM were evaluated for each significant source category. The 2002 Salt River Study Area source categories include: industrial sources, point emissions, area emissions, construction, area sources, unpaved parking lots, unpaved shoulders, roads and trackout, freeways, primary roads, secondary roads, agricultural tillage, windblown dust, agricultural fields, alluvial channels, disturbed areas, stockpiles, and vacant lots.

Rule 310.01 control measures for reducing windblown particulate matter emissions from open areas, vacant lots, and the alluvial channel can be grouped into the following categories:

- Soil Stabilization: Establish a vegetative ground cover on disturbed areas, restore disturbed surface areas such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby native conditions, apply a dust suppressant to disturbed surface areas, and uniformly apply and maintain surface gravel, river rock, or broken concrete debris on disturbed surface areas.
- Barriers To Trespassing: Prevent vehicles from having access to open areas and vacant lots, install concrete and rock barriers, fences, ditches, and/or berms, and post "No Trespassing" signs. Barriers and signs are necessary for law enforcement to respond to trespassing complaints.
- Wind Breaks: Reduce surface wind speeds to below the re-entrainment emission threshold of 15 miles per hour, install chain link fences with inserts and walls and plant trees and shrubs.

12. Identification Of Section/Paragraph In Rule That Contains Emission Limitations, Work Practice Standards, Averaging Times, Test Procedures And/Or Recordkeeping/Reporting Requirements:

Rule 310.01 includes work practice standards, exemptions, recordkeeping/reporting requirements, and test methods in the following sections

102 - Applicability
300 – Standards
301 – Vehicle Use In Open Areas And Vacant Lots
501 – Stabilization Observations
502 - Recordkeeping

13. Compliance/Enforcement Strategies To Be Used To Determine Compliance (Including Frequency Of Inspection):

Rule 310.01 requirements are administered through a visual inspection program that includes inspection of work sites, performance of compliance test methods, and review of records and activities. Maricopa County's enforcement options include: compliance status notification, notice of violation, follow-up inspection/investigation, Department reports, referral to County Attorney, review by Enforcement Officer, order of abatement by consent, order of abatement, civil complaint, notice to appear and complaint (criminal complaint), injunctive relief, photographs, videos, compliance inspection reports, correspondence, records, other applicable documentation, and analytical tests.

14. Special Economic/Technological Justifications For Deviations From EPA Policies (As Appropriate):

Rule 310.01 does not deviate from EPA policies.

15. Other Comments

Attached Support Documentation Includes The Following:

Appendix 1	Notice Of Proposed Rulemaking
Appendix 2	Agenda Form And Notice Of Final Rulemaking
Appendix 3	Notice Of Public Hearing
Appendix 4	Affidavit Of Publication
Appendix 5	Certified Excerpts From The Minutes Of The Board Of Supervisors' Public Hearing
Appendix 6	Final Adopted Version Of Rule

For EPA Use Only

SIP Rule Revision Is: _____ Complete _____ Incomplete

	Name	Telephone Number
District Contact:	Jo Crumbaker	602.506.6705
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EPA Contact:		

State Submittal Date: _____

EPA SIP Enforceability Statement

1. APPLICABILITY

a. What sources are being regulated?

Rule 310.01 limits the emission of PM_{10} into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways that are not regulated by Rule 310 (Fugitive Dust) of the Maricopa County Air Pollution Control Regulations and that do not require a permit nor a Dust Control Plan.

b. What exemptions are provided?

Exemptions are described in Rule 310.01, Section 102: The provisions of Rule 310.01 shall not apply to normal farm cultural practices according to ARS §49-457 and ARS §49-504.4.

c. What are the units of compliance?

In Rule 310.01, the units of compliance include implementing fugitive dust control measures and complying with stabilization and opacity limitations.

d. Is bubbling or averaging of any type allowed?

No.

e. If there is a redesignation, will this change the emission limitations?

No.

2. COMPLIANCE DATES

a. What is the compliance date?

Rule 310.01 became effective on the date of adoption/approval of revisions – February 17, 2005.

b. What is the attainment date?

PM_{10} Attainment Date:	December 31, 2006
Carbon Monoxide Attainment Date:	April 8, 2005 (re-classified as attainment)
1-Hour Ozone Attainment Date:	March 21, 2005
8-Hour Ozone Attainment Date:	2009

3. SPECIFICITY OF CONDUCT

a. What test method is required?

Rule 310.01, Section 501.1 and Section 501.2 describe test methods.

b. What is the averaging time in the compliance test method?

Not applicable.

4. RECORDKEEPING

a. What records are required to determine compliance?

Rule 310.01, Section 502 describes recordkeeping requirements as follows: Any person subject to the requirements of this rule shall compile and retain records that provide evidence of control measure application (i.e., receipts and/or purchase records). Such person shall describe, in the records, the type of treatment or control measure, extent of coverage, and date applied. Upon verbal or written request by the Control Officer, such person shall provide the records and supporting documentation within 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, such

person shall provide the records without delay.

b. In what forms or units must records be kept?

Rule 310.01, Section 502 describes recordkeeping requirements as follows: Any person subject to the requirements of this rule shall compile and retain records that provide evidence of control measure application (i.e., receipts and/or purchase records). Such person shall describe, in the records, the type of treatment or control measure, extent of coverage, and date applied. Upon verbal or written request by the Control Officer, such person shall provide the records and supporting documentation within 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, such person shall provide the records without delay.

c. On what time basis must records be kept?

Rule 310.01, Section 502 requires that records be retained for at least one year.

Appendix 1

NOTICE OF PROPOSED RULEMAKING
MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
REGULATION III
RULE 310.01 - FUGITIVE DUST FROM OPEN AREAS, VACANT LOTS, UNPAVED PARKING LOTS, AND UNPAVED ROADWAYS
PREAMBLE

1. Sections affected — Rulemaking Action
   Rule 310.01, all sections — Amend

2. Statutory Authority for the rulemaking:
   Authorizing statutes: Arizona Revised Statutes, Title 49, Chapter 3, Article 3, Sections 479 and 480 (A.R.S. § 49-479, A.R.S. § 49-480)
   Implementing statute: Arizona Revised Statutes, Title 49, Chapter 1, Article 1, Section 112 (A.R.S. § 49-112)

3. List of all previous notices appearing in the register addressing the proposed rule:
   Notice of Rulemaking Docket Opening: Volume #10, A.A.R. Issue #23, p. 2266, June 4, 2004

4. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:
   Name: Johanna M. Kuspert or Jo Crumbaker
   Address: 1001 N. Central Ave, Suite 695 Phoenix, AZ 85004
   Phone Number: 602-506-3476 or 602-506-6705
   Fax Number: 602-506-6179
   Email Address: jkuspert@mail.maricopa.gov or jcrumbak@mail.maricopa.gov

5. An explanation of the rule, including the agency's reasons for initiating the rulemaking:
   Rule 310.01 (Fugitive Dust From Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways) limits the emission of particulate matter (PM10) into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways that are not regulated by Rule 310 (Fugitive Dust) of the Maricopa County Air Pollution Control Regulations and that do not require a permit nor a Dust Control Plan.

   Maricopa County adopted Rule 310.01 in June 1999 and revised Rule 310.01 in February 2000, in order to make Rule 310.01 approvable to the Environmental Protection Agency (EPA) as a replacement to the Federal Implementation Plan (FIP) and so that Rule 310.01 could be incorporated into the State Implementation Plan (SIP). Maricopa County is again proposing to revise Rule 310.01. The revisions being proposed now, however, are being made to address commitments proposed in the Salt River PM_{10} State Implementation Plan (SIP) Revision.

   Other revisions to Rule 310.01 are being proposed in order to improve clarity and to fix typographical and formatting errors.

   Section By Section Explanation Of Changes:
   Section 101 This proposed revision deletes "sources".
   Section 102 This proposed revision deletes "sources".
   Section 200 This proposed revision deletes "For the purpose of this rule, the following definitions shall apply. See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used by not specifically defined in this rule" and adds "See Rule 100 (General Provisions And Definitions) of these rules for

definitions of terms that are used but not specifically defined in this rule. For the purpose of this rule, the following definitions shall apply".

Section 201 This proposed revision adds "fluff (from shredders)", and "that are capable of producing fugitive dust".

Section 203 This proposed revision deletes the definition of commercial feedlots and/or commercial livestock areas.

Section 204 This proposed revision deletes "Section 501" and adds "Section 300".

Section 206 This proposed revision adds the definition of feedlots and/or livestock areas.

Section 207 This proposed revision deletes "which is" and "which" and adds "that".

Section 211 This proposed revision deletes "subsection 211.1" and "subsection 211.4" and adds "Section 211.1" and "Section 211.4".

Section 211.2 This proposed revision deletes "which" and adds "that".

Section 214 This proposed revision adds the definition of PM10 nonattainment area.

Section 301 This proposed revision deletes "subsection" and "measures" and adds "Section 301.1", "Within 30 calendar days following the initial discovery by the Control Officer of vehicle use on open areas and vacant lots, the owner and/or operator of such open areas and vacant lots shall provide in writing to the Control Officer a description and date of the control measure(s) to be implemented to prevent such vehicle use on open areas and vacant lots", "measure(s)", "Section 301.2", "Once a control measure in Section 301.1 of this rule has been effectively implemented, then such open area or vacant lot is subject to the requirements of Section 302 (Open Areas And Vacant Lots) of this rule. Although, such open area and vacant lot shall still meet the thresholds described in Section 302 of this rule and the stabilization limitations described in Section 302.2 of this rule", and "although such open areas and vacant lots shall still meet the stabilization limitations described in Section 301.2 of this rule".

Section 301 addresses vehicle use in open areas and vacant lots. According to Section 301, if open areas and vacant lots are 0.10 acre or larger and have a cumulative of 500 square feet or more that are driven over and/or used by motor vehicles, then the owner and/or operator of such open areas and vacant lots must implement a control measure(s). During the rulemaking process in 2000, Stakeholders requested a minimum threshold for regulation of trespass on open areas and vacant lots, because without such threshold, Rule 310.01 is more strict than the Federal Implementation Plan (FIP). For example, Rule 310.01 does not require control measures for 100 cars in a parking lot for 35 days a year but does require control measures if one car trespasses on a vacant lot, and Rule 310.01 does not require control measures if less than 150 trips per day are made on an unpaved haul/access road and does not require control measures if an unpaved parking lot is less than 5,000 square feet, but does require control measures if one car trespasses on a vacant lot. EPA had concerns with allowing a specific number of vehicles to trespass an open area and vacant lot below which no regulation would occur; EPA reasoned that such allowance would be contrary to preventing trespass on open areas and vacant lots. Nevertheless, after many months of discussion, the Stakeholders, EPA, and Maricopa County agreed to revise Rule 310.01, Section 301 to include the "0.10 acre or larger and have a cumulative of 500 square feet or more" thresholds. The "cumulative of 500 square feet or more" threshold was added, per the EPA's comment made during a conference call on January 4, 2000 and was based-on the EPA's reasonableness test and visual inspections in Phoenix.

Also, for the purpose of Rule 310.01, if there are maintenance roads and access roads on municipal property and/or in municipal parks, then such maintenance roads and access roads are not considered open areas and vacant lots and are

not subject to the "cumulative of 500 square feet or more" threshold described in Rule 310.01, Section 301.

Section 301.1(a) This proposed revision deletes "Once vehicular traffic has been restricted from an open area or a vacant lot, such open area or vacant lot is no longer subject to the requirements of Section 301 of this rule, but rather such open area and vacant lot is subject to the requirements of Section 302 (Open Areas And Vacant Lots) of this rule" and adds "(written in English and Spanish and in compliance with ordinance(s) of local jurisdictions)".

Section 301.1(b) This proposed revision deletes "subsection 301.2" and adds "Section 301.2".

Section 301.1(c) This proposed revision deletes "Environmental Protection Agency (EPA)" and adds "EPA".

Section 301.2(g) This proposed revision deletes "Environmental Protection Agency (EPA)" and adds "EPA".

Section 302 This proposed revision deletes "subsection 302.1" and "measures" and adds "Section 302.1", "Within 30 calendar days following the initial discovery by the Control Officer of the disturbance on the open areas and vacant lots, the owner and/or operator of such open areas and vacant lots shall provide in writing to the Control Officer a description and date of the control measure(s) to be implemented", "measure(s)", "Section 302.2", and "Should an open area or vacant lot on which no activity is occurring contain more than one type of disturbance, soil, vegetation, or other characteristics that are visibly distinguishable, then the owner and/or operator shall test each representative surface separately for stability, in an area that represents a random portion of the overall disturbed conditions of the site, according to the appropriate test methods in Appendix C of these rules and included or eliminated from the total size assessment of disturbed surface area(s) depending on test method results".

Section 302.1(a) This proposed revision deletes "subsection 302.2" and adds "Section 302.2".

Section 302.1(b) This proposed revision deletes "subsection 302.2" and adds "Section 302.2".

Section 302.1(c) This proposed revision deletes "subsection 302.2", "this", and "the" and adds "Section 302.2" and "such".

Section 302.1(d) This proposed revision deletes "subsection 302.2" and adds "Section 302.2".

Section 302.1(e) This proposed revision deletes "Environmental Protection Agency (EPA)" and adds "EPA".

Section 303 This proposed revision deletes "subsection 303.1", "limitation", and "For the purpose of this rule, the owner and/or operator of an unpaved parking lot on which vehicles are parked no more than 35 days per year, excluding days on which ten or fewer vehicles enter, shall implement either the control measure described in subsection 303.1(b) or subsection 303.1(c) below for the duration of time that over 100 vehicles enter and/or park on such unpaved parking lot. In addition, for the purpose of this rule, such control measures shall be considered effectively implemented when the unpaved parking lot meets the stabilization limitation described in subsection 303.2 of this rule" and adds "Section 303.1", "and opacity limitations", "on any surface area(s) of the lot on which vehicles enter, park, and exit. For unpaved parking lots that are utilized intermittently, for a period of 35 days or less during the calendar year, the owner and/or operator shall implement one of the control measures described in Section 303.1 of this rule, during that period that the unpaved parking lots are utilized for vehicle parking", and "For the purpose of this rule", "measure(s)", "Section 303.2".

Section 303.1(b) This proposed revision deletes "subsection 303.2" and "limitation" and adds "Section 303.2" and "and opacity limitations".

Section 303.1(c) This proposed revision deletes "subsection 303.2" and "limitation" and adds "Section 303.2" and "and opacity limitations"

Section 303.2 This proposed revision deletes "limitation" and "do not equal or exceed 0.33 oz/ft2 silt loading, or do not exceed 6% silt content, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization For Unpaved Roads And Unpaved Parking Lots) of these rules" and adds "and opacity limitations", "and opacity", and "meet one of the following as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules".

Section 303.2(a) This proposed revision adds "Silt loading is not equal to or greater than 0.33 oz/ft^2; or".

Section 303.2(b) This proposed revision adds "Silt content does not exceed 8%".

Section 304 This proposed revision deletes "subsection 304.1", "best available", "Existing unpaved roadways (including alleys) with vehicular traffic of 250 vehicles or more per day must be stabilized by one of the best available control measures described in subsection 304.1 of this rule by June 10, 2000. Existing unpaved roadways (including alleys) with vehicular traffic of 150 vehicles or more per day must be stabilized by one of the best available control measures described in subsection 304.1 of this rule by June 10, 2004", "the best available", "measures", and "complies with subsection 304.3", and adds "PM_{10}", "Section 304.1", "such", "measure(s)", and "meets the stabilization and opacity limitations described in Section 304.2".

Section 304 includes the threshold "150 vehicles or more per day". For the purpose of Rule 310.01, "day" is defined in terms of the definition of average daily trips. Average daily trips is defined in the Federal Implementation Plan as "the average number of vehicles that cross a given surface during a specified 24-hour time period as determined by the Institute Of Transportation Engineers Trip Generation Report (6th Edition, 1997) or tube counts".

Section 304.1 This proposed revision deletes "Best Available" from the heading.

Section 304.1(b) This proposed revision deletes "subsection 304.3" and "limitation" and adds "Section 304.2" and "and opacity limitations".

Section 304.1(c) This proposed revision deletes "subsection 304.3" and "limitation" and adds "Section 304.2" and "and opacity limitations".

Section 304.2 This proposed revision deletes Section 304.2 in its entirety. The dates for implementing best available control measures have passed.

Section 304.2(a) This proposed revision adds "Silt loading is not equal to or greater than 0.33 oz/ft^2; or".

Section 304.2(b) This proposed revision adds "Silt content does not exceed 6%".

Section 304.3 This proposed revision re-numbers "Section 304.3" to "Section 304.2", deletes "limitation" and "do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 6% silt content, as determined in Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules" and adds "and opacity limitations", "and opacity", and "meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization For Unpaved Roads And Unpaved Parking Lots) of these rules".

Section 305 This proposed revision deletes "commercial" and "subsection 305.1" and adds "Section 305.1" and "For the purpose of this rule, such control measure(s) shall be considered effectively implemented when the feedlot and/or livestock area meets the opacity limitations described in Section 305.2 of this rule".

Section 305.1(a) This proposed revision deletes "subsection 305.2" and "stabilization" and adds "Section 305.2" and "opacity".

Section 305.1(b) This proposed revision deletes "subsection 305.2" and "stabilization" and adds "Section 305.2" and "opacity".

Section 305.1(c) This proposed revision deletes "subsection 305.2" and "stabilization" and adds "Section 305.2" and "opacity".

Section 305.2 This proposed revision deletes "stabilization" and "No fugitive dust plume emanating from commercial feedlots and/or commercial livestock areas shall exceed 20% opacity" and adds "opacity" and "For the purpose of this rule, control measures shall be considered effectively implemented when opacity observations for fugitive dust emissions from feedlots and /or livestock areas do not exceed 20% opacity".

Section 306 This proposed revision deletes "subsection 306.1", "such", "stabilization", "subsection 306.2", and "limit", and adds "Section 306.1", "For the purpose of this rule, such", "opacity", "Section 306.2", and "limitation".

Section 306.2 This proposed revision deletes "stabilization" and adds "opacity".

Section 307 This proposed revision deletes "person", "subsection 307.1", "the", "measures", and "complies with subsection 307.2" and adds "an owner and/or operator", "PM10", "Section 307.1", "such", "measure(s)", and "meets the stabilization and opacity limitations described in Section 307.2 of this rule".

Section 307.1(b) This proposed revision deletes "limitation" and "subsection 307.2" and adds "and opacity limitations" and "Section 307.2".

Section 307.1(c) This proposed revision deletes "limitation" and "subsection 307.2" and adds "and opacity limitations" and "Section 307.2".

Section 307.2 This proposed revision deletes "limitation" and "do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 6% silt content, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization For Unpaved Roads And Unpaved Parking Lots) of these rules" and adds "and opacity limitations" and "meet one of the following as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules".

Section 307.2(a) This proposed revision adds "Silt loading is not equal to or greater than 0.33 oz/ft^2; or".

Section 307.2(b) This proposed revision adds "Silt content does not exceed 6%".

Section 502 This proposed revision deletes "The records should", "shall be provided", and "records shall be provided" and adds "such", "in the records", "such person shall provide", and "such person shall provide the records".

6. Demonstration of compliance with A.R.S. §49-112:

Under A.R.S. §49-479(c), a county may not adopt a rule that is more stringent than the rules adopted by the director of the Arizona Department of Environmental Quality (ADEQ) for similar sources unless it demonstrates compliance with the requirements of A.R.S. §49-112. Under that statute:

> When authorized by law, a county may adopt a rule, ordinance, or other regulation that is more stringent than or in addition to a provision of this title or rule adopted by the director or any board or commission authorized to adopt rules pursuant to this title if all the following conditions are met:
>
> 1. The rule, ordinance or other regulation is necessary to address a peculiar local condition;
> 2. There is credible evidence that the rule, ordinance or other regulation is either:
>   (a) Necessary to prevent a significant threat to public health or the environment that results from a peculiar local condition and is technically and economically feasible
>   (b) Required under a federal statute or regulation, or authorized pursuant to an intergovernmental agreement with the federal government to

enforce federal statutes or regulations if the County rule, ordinance or other regulation is equivalent to federal statutes or regulations.

A.R.S. §49-112 (A).

Maricopa County is proposing to revise Rule 310.01 in order to address a peculiar local condition: the designation of Maricopa County as a serious nonattainment area for PM_{10} and to address Best Available Control Measures (BACM) and Most Stringent Measures (MSM) proposed in the Salt River PM_{10} State Implementation Plan (SIP) Revision.

Maricopa County is the only PM_{10} serious nonattainment area in Arizona, consequently stronger regulations must be adopted in this area to address a serious health threat. Because of this, the revision complies with A.R.S. §49-112 (A)(1). Additionally because Rule 310.01 is part of the Arizona State Implementation plan for the control of PM_{10}, the regulation is federally enforceable and changes are required under 40 C.F.R. 51.120 (c)(102) to effect enforceable commitments made by Maricopa County. Therefore the rule revisions are also made pursuant to A.R.S. §49-112 (2).

In addition, the purpose of the Salt River PM10 SIP Revision is to meet the Environmental Protection Agency's (EPA's) requirements to implement control measures committed to in the Salt River Plan by February 2, 2005 and to demonstrate attainment of the 24-hour federal standard for coarse particulate matter air pollution by December 31, 2006 in the Salt River Study Area. The EPA requires that control measures applied to significant sources of PM_{10} emissions in the Salt River Study Area be applied to similar sources throughout the Maricopa County serious PM_{10} nonattainment area. The proposed revisions to Rule 310.01 should meet such requirements.

7. A reference to any study relevant to the rule that the agency reviewed and either proposes to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

   "Proposed Revised PM_{10} State Implementation Plan For The Salt River Area", Air Quality Division, Arizona Department Of Environmental Quality, June 2004.
   Available for review at: http://www.adeq.state.az.us/environ/air/plan/download/proposedsip.pdf
   Or contact:
   Mark Lewandowski
   Arizona Department Of Environmental Quality
   Mailcode: 3415A-3
   ADEQ Central Office
   1110 West Washington Street
   Phoenix, Arizona 85007
   602.771.2230

8. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision:

   Not applicable

9. The preliminary summary of the economic, small business, and consumer impact:

   Economic Impacts On Regulated Sources:

   The proposed revisions to Rule 310.01 are administrative in nature and will not raise costs for regulated sources.

   Economic Impacts On County Resources:

Along with the proposed revisions to Rule 310.01, Maricopa County is proposing to provide additional inspection and enforcement personnel.

In 1998, Maricopa County had four inspectors, one supervisor, and one enforcement officer on staff to enforce 1,700 earthmoving permits. In 2000, Maricopa County increased the number of personnel working on Maricopa County Rule 310 (Fugitive Dust) compliance to eight inspectors, one supervisor, one coordinator, two enforcement officers, one aide, and one county attorney. In 2000, Maricopa County was responsible for 2,500 earthmoving permits. Currently, Maricopa County is responsible for 4,150 earthmoving permits.

By September 2004, Maricopa County will complete three workload analyses. The first analysis will focus on three to five inspections per year at earthmoving sites ten acres or larger in size and one inspection per year at smaller sites for compliance with Maricopa County Rule 310 (Fugitive Dust). The second analysis will focus on inspections of 5,300 vacant lots per year, which constitutes 20% of the 26,446 vacant lots identified as of October 2003, for compliance with Maricopa County Rule 310.01 (Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways).

The third analysis will focus on increasing inspection for compliance with Maricopa County Rule 316 (Nonmetallic Mineral Processing) to four times per year. The workload analysis will also address proposed enforcement for Maricopa County's proposed new Rule 325 (Brick And Structural Clay Manufacturing), which will provide PM_{10} controls for structural clay and brick manufacturers.

These analyses are expected to result in identification of the number of additional personnel and salaries/fringe benefits totals necessary for an effective enforcement effort to attain the PM_{10} standard. Interim funding to enable accelerated hiring of some additional personnel will also be explored and identified by September 2004. A resolution committing Maricopa County to a funding mechanism and specified number of enforcement positions to be added and filled in 2004-2005 will be presented to the Maricopa County Board Of Supervisors for adoption at its September meeting. Following adoption of the resolution, Maricopa County will hire additional personnel in October 2004 through September 2005. In the interim, Maricopa County will revise fees through revisions to Maricopa County Rule 280 (Fees) to fund the additional positions.

Health Costs:

Because Maricopa County is a serious nonattainment area for PM_{10}, which these proposed revisions address, it is imperative to consider the medical and social costs of failing to take steps toward the improvement of the air quality. Adverse health effects from air pollution result in a number of economic and social consequences, including:

1. Medical Costs - Personal out-of-pocket expenses of the affected individual (or family), plus costs paid by insurance or Medicare, for example.
2. Work Loss – Lost personal income, plus lost productivity whether the individual is compensated for the time or not. For example, some individuals may perceive no income loss because they receive sick pay, but sick pay is a cost of business and reflects lost productivity.
3. Increased Costs For Chores And Caregiving – Special caregiving and services that are not reflected in medical costs. These costs may occur, because some health effects reduce the affected individual's ability to undertake some or all normal chores. The affected individual may require extra care.

4. Other Social And Economic Costs – Restrictions on or reduced enjoyment of leisure activities, increased discomfort or inconvenience, increased pain and suffering, anxiety about the future, and concern and inconvenience to family members.

Rule Impact Reduction On Small Businesses:
A.R.S. §41-1055 requires Maricopa County to reduce the impact on small businesses by using certain methods when they are legal and feasible in meeting the statutory objectives of the rulemaking. A small business is defined in A.R.S. §41-1001 as a "concern, including its affiliates, which is independently owned and operated, which is not dominant in its field and which employs fewer than one hundred full-time employees or which had gross annual receipts of less than four million dollars in its last fiscal year. For purposes of a specific rule, an agency may define small business to include more persons if it finds that such a definition is necessary to adapt the rule to the needs and problems of small businesses and organizations." Maricopa County solicits input from stakeholders (i.e., small businesses) regarding administrative costs associated with compliance with proposed rulemakings and any other information relevant to the economics, small business, and consumer impact statement. Because of the nature of the proposed revisions to Rule 310.01, small businesses will be affected only minimally.

Conclusion:
Because the proposed changes to Rule 310.01 will essentially clarify requirements that already exist, there is only a minimal economic impact on regulated entities, county resources, small businesses, and the public at large.

10. Name and address of department personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

    Name: Johanna M. Kuspert or Jo Crumbaker
    Address: 1001 N. Central Ave, Suite 695 Phoenix, AZ 85004
    Phone Number: 602-506-3476 or 602-506-6705
    Fax Number: 602-506-6179
    Email Address: jkuspert@mail.maricopa.gov or jcrumbak@mail.maricopa.gov

11. The time, place and nature of the proceedings for the amendment of the rule:

    Written comments will be accepted if received between the date of this publication and Friday, December 3, 2004, 5:00 p.m. Written comments may be mailed or hand delivered to the Maricopa County Environmental Services Department (see #4 above). Written comments received during the comment period will be considered formal comments to the proposed rules and will be responded to in the Notice Of Final Rulemaking. An oral proceeding will be held Thursday, December 2, 2004 at 1:30 pm at the Maricopa County Environmental Services Department, Suite 560 (see Item #4 above). All comments made at this oral proceeding will be considered formal comments and will be recorded and transcribed. All formal comments will be addressed in the Notice Of Final Rulemaking.

12. Any other matters prescribed by the statute that are applicable to the specific agency or to any specific rule or class of rules:

    None

13. Incorporations by reference and their location in the rules:

Incorporation By Reference	Location
Appendix C, Section 2.1	Rule 310.01, Section 501.1
Appendix C, Section 2.3	Rule 310.01, Section 501.2(a)
Appendix C, Section 2.4	Rule 310.01, Section 501.2(b)
Appendix C. Section 2.5	Rule 310.01, Section 501.2(c)

Appendix C, Section 2.6	Rule 310.01, Section 501.2(d) and (e)
Appendix C, Section 2.7	Rule 310.01, Section 501.2(f)

14. The full text of the rule follows:

REGULATION III - CONTROL OF AIR CONTAMINANTS
RULE 310.01
FUGITIVE DUST FROM
OPEN AREAS, VACANT LOTS, UNPAVED PARKING LOTS, AND UNPAVED ROADWAYS
INDEX

Adopted 06/16/99
Revised 02/16/00

MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III - CONTROL OF AIR CONTAMINANTS
RULE 310.01
FUGITIVE DUST FROM
OPEN AREAS, VACANT LOTS, UNPAVED PARKING LOTS, AND UNPAVED ROADWAYS

SECTION 100 - GENERAL

101 PURPOSE: To limit the emission of particulate matter into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways which are not regulated by Rule 310 (Fugitive Dust ~~Sources~~) of these rules and which do not require a permit nor a Dust Control Plan. The effect of this rule shall be to minimize the amount of fine particulate matter (PM_{10}) entrained into the ambient air as a result of the impact of human activities by requiring measures to prevent, reduce, or mitigate particulate matter emissions.

102 APPLICABILITY: The provisions of this rule shall apply to open areas, vacant lots, unpaved parking lots, and unpaved roadways which are not regulated by Rule 310 (Fugitive Dust ~~Sources~~) of these rules and which do not require a permit nor a Dust Control Plan. In addition, the provisions of this rule shall apply to any open area or vacant lot that is not defined as agricultural land and is not used for agricultural purposes according to Arizona Revised Statutes (ARS) §42-12151 and ARS §42-12152. The provisions of this rule shall not apply to normal farm cultural practices according to ARS §49-457 and ARS §49-504.4.

SECTION 200 - DEFINITIONS: ~~For the purpose of this rule, the following definitions shall apply. See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule.~~ See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule. For the purpose of this rule, the following definitions shall apply:

201 BULK MATERIAL - Any material, including, but not limited to, earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than 2 inches in length or diameter (i.e., aggregate base course (ABC)), dirt, mud, demolition debris, cotton, trash, cinders, pumice, saw dust, feeds, grains, fertilizers, fluff (from shredders), and dry concrete, that are capable of producing fugitive dust.

202 CHEMICAL/ORGANIC STABILIZER - Any non-toxic chemical or organic dust suppressant, other than water, which meets any specifications, criteria, or tests required by any Federal, State, or local water agency and is not prohibited for use by any applicable law, rule, or regulation.

~~203 COMMERCIAL FEEDLOTS AND/OR COMMERCIAL LIVESTOCK AREAS - Any operation directly related to feeding animals, displaying animals, racing animals, exercising animals, and/or for any other such activity, for the primary purpose of livelihood.~~

~~204~~ 203 CONTROL MEASURE - A technique, practice, or procedure used to prevent or minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust.

~~205~~ 204 DISTURBED SURFACE AREA - A portion of the earth's surface (or material placed thereupon) which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition, thereby increasing the potential for the emission of fugitive dust. For the purpose of this rule, an area is considered to be a disturbed surface area until the activity that caused the disturbance has been completed and the disturbed surface area meets the standards described in ~~Section 501~~ Section 300 of this rule, as applicable.

~~206~~ 205 DUST SUPPRESSANT - Water, hygroscopic material, solution of water and chemical surfactant, foam, non-toxic chemical stabilizer, or any other dust palliative, which is not prohibited for ground surface application by the Environmental Protection Agency (EPA) or

the Arizona Department of Environmental Quality (ADEQ), or any applicable law, rule, or regulation, as a treatment material for reducing fugitive dust emissions.

206 FEEDLOTS AND/OR LIVESTOCK AREAS - Any area on which an operation directly related to feeding animals, displaying animals, racing animals, exercising animals, and/or for any other such activity exists.

207 FUGITIVE DUST - The particulate matter~~, which is~~ not collected by a capture system, ~~which~~ that is entrained in the ambient air and ~~which~~ is caused from human and/or natural activities, such as, but not limited to, movement of soil, vehicles, equipment, blasting, and wind. For the purpose of this rule, fugitive dust does not include particulate matter emitted directly from the exhaust of motor vehicles and other internal combustion engines, from portable brazing, soldering, or welding equipment, and from piledrivers, and does not include emissions from process and combustion sources that are subject to other rules in Regulation III (Control Of Air Contaminants) of these rules.

208 MOTOR VEHICLE - A self-propelled vehicle for use on the public roads and highways of the State of Arizona and required to be registered under the Arizona State Uniform Motor Vehicle Act, including any non-motorized attachments, such as but not limited to, trailers or other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.

209 NORMAL FARM CULTURAL PRACTICE - All activities by the owner, lessee, agent, independent contractor, and/or supplier conducted on any facility for the production of crops and/or nursery plants. Disturbances of the field surface caused by turning under stalks, tilling, leveling, planting, fertilizing, or harvesting are included in this definition.

210 OFF-ROAD VEHICLE - Any self-propelled conveyance specifically designed for off-road use, including, but not limited to, off-road or all-terrain equipment, trucks, cars, motorcycles, motorbikes, or motorbuggies.

211 OPEN AREAS AND VACANT LOTS - Any of the following described in ~~subsection 211.1~~ Section 211.1 through ~~subsection 211.4~~ Section 211.4 of this rule. For the purpose of this rule, vacant portions of residential or commercial lots that are immediately adjacent and owned and/or operated by the same individual or entity are considered one vacant open area or vacant lot.

211.1 An unsubdivided or undeveloped tract of land adjoining a developed or a partially developed residential, industrial, institutional, governmental, or commercial area.

211.2 A subdivided residential, industrial, institutional, governmental, or commercial lot~~, which~~ that contains no approved or permitted buildings or structures of a temporary or permanent nature.

211.3 A partially developed residential, industrial, institutional, governmental, or commercial lot.

211.4 A tract of land, in the PM_{10} nonattainment area, adjoining agricultural property.

212 OWNER AND/OR OPERATOR - Any person who owns, leases, operates, controls, or supervises a fugitive dust source subject to the requirements of this rule.

213 PAVE - To apply and maintain asphalt, concrete, or other similar material to a roadway surface (i.e., asphaltic concrete, concrete pavement, chip seal, or rubberized asphalt).

214 PM_{10} NONATTAINMENT AREA - An area designated by the EPA as exceeding national ambient air quality standards based upon data collected thru air quality monitoring. The geographical boundary of Maricopa County's PM_{10} nonattainment area is defined as the rectangle determined by and including the following townships and ranges: T6N, R3W; T6N, R7E; T2S, R3W; T2S, R7E; and T1N, R8E. Maricopa County's PM_{10} nonattainment area includes the following cities: Surprise, Peoria, Glendale, Phoenix, Scottsdale, Tempe, Mesa, Gilbert, Chandler, Avondale, Buckeye, and Goodyear.

~~214~~ 215 PUBLIC ROADWAYS - Any roadways that are open to public travel.

~~215~~ 216 UNPAVED PARKING LOT - Any area larger than 5,000 square feet that is not paved and that is used for parking, maneuvering, or storing motor vehicles.

~~216~~ 217 UNPAVED ROADWAY (INCLUDING ALLEYS) - A road that is not paved and that is owned by Federal, State, county, municipal, or other governmental or quasi-governmental agencies. For the purpose of this rule, an unpaved roadway (including alleys) is not a horse trail, hiking path, bicycle path, or other similar path used exclusively for purposes other than travel by motor vehicles.

~~217~~ 218 VACANT LOT - The definition of vacant lot is included in Section 211 (Definition Of Open Areas And Vacant Lots) of this rule.

SECTION 300 - STANDARDS

301 VEHICLE USE IN OPEN AREAS AND VACANT LOTS: If open areas and vacant lots are 0.10 acre or larger and have a cumulative of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, then the owner and/or operator of such open areas and vacant lots shall implement one of the control measures described in ~~subsection 301.1~~ Section 301.1 of this rule within 60 calendar days following the initial discovery of vehicle use on open areas and vacant lots. Within 30 calendar days following the initial discovery by the Control Officer of vehicle use on open areas and vacant lots, the owner and/or operator of such open areas and vacant lots shall provide in writing to the Control Officer a description and date of the control measure(s) to be implemented to prevent such vehicle use on open areas and vacant lots. For the purpose of this rule, such control ~~measures~~ measure(s) shall be considered effectively implemented when the open areas and vacant lots meet one of the stabilization limitations described in ~~subsection 301.2~~ Section 301.2 of this rule. Once a control measure in Section 301.1 of this rule has been effectively implemented, then such open area or vacant lot is subject to the requirements of Section 302 (Open Areas And Vacant Lots) of this rule. Use of or parking on open areas and vacant lots by the owner and/or operator of such open areas and vacant lots and/or landscape maintenance of such open areas and vacant lots shall not be considered vehicle use in open areas and vacant lots, although such open areas and vacant lots shall still meet the stabilization limitations described in Section 301.2 of this rule. For the purpose of this rule, landscape maintenance does not include grading, trenching, nor any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

301.1 Control Measures:

a. Prevent motor vehicle and/or off-road vehicle trespassing, parking, and/or access, by installing barriers, curbs, fences, gates, posts, signs (written in English and Spanish and in compliance with ordinance(s) of local jurisdictions), shrubs, trees, or other effective control measures. ~~Once vehicular traffic has been restricted from an open area or a vacant lot, such open area or vacant lot is no longer subject to the requirements of Section 301 of this rule, but rather such open area and vacant lot is subject to the requirements of Section 302 (Open Areas And Vacant Lots) of this rule.~~

b. Uniformly apply and maintain surface gravel or chemical/organic stabilizers to all areas disturbed by motor vehicles and/or off-road vehicles in compliance with one of the stabilization limitations described in ~~subsection 301.2~~ Section 301.2 of this rule.

c. Apply and maintain an alternative control measure approved in writing by the Control Officer and the Administrator of the ~~Environmental Protection Agency (EPA)~~ EPA.

301.2 Stabilization Limitations:

a. A visible crust shall be implemented, as determined by Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. A threshold friction velocity (TFV) corrected for non-erodible elements of 100 cm/second or higher shall be implemented, as determined by Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules; or

c. Flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50% shall be implemented, as determined by Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules; or

d. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30% shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

e. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

f. A percent cover that is equal to or greater than 10% for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules; or

g. An alternative test method approved in writing by the Control Officer and the Administrator of the ~~Environmental Protection Agency (EPA)~~ EPA shall be implemented.

302 OPEN AREAS AND VACANT LOTS: If open areas and vacant lots have 0.5 acre or more of disturbed surface area and remain unoccupied, unused, vacant, or undeveloped for more than 15 days, then the owner and/or operator of such open areas and vacant lots shall implement one of the control measures described in ~~subsection 302.1~~ Section 302.1 of this rule within 60 calendar days following the initial discovery of the disturbance on the open areas and vacant lots. Within 30 calendar days following the initial discovery by the Control Officer of the disturbance on the open areas and vacant lots, the owner and/or operator of such open areas and vacant lots shall provide in writing to the Control Officer a description and date of the control measure(s) to be implemented. For the purpose of this rule, such control ~~measures~~ measure(s) shall be considered effectively implemented when the open areas and vacant lots meet one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of this rule. Should an open area or vacant lot on which no activity is occurring contain more than one type of disturbance, soil, vegetation, or other characteristics that are visibly distinguishable, then each representative surface shall be tested separately for stability, in an area that represents a random portion of the overall disturbed conditions of the site, according to the appropriate test methods in Appendix C of these rules and included or eliminated from the total size assessment of disturbed surface area(s) depending on test method results.

302.1 Control Measures:

a. Establish vegetative ground cover on all disturbed surface areas within 60 calendar days following the initial discovery of the disturbance. Such control measure(s) must be maintained and reapplied, if necessary, until the disturbed surface areas are stabilized, in compliance with one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of

this rule. Stabilization shall be achieved, per this control measure, within eight months after the control measure has been implemented.

b. Apply a dust suppressant to all disturbed surface areas, in compliance with one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of this rule.

c. Restore all disturbed surface areas within 60 calendar days following the initial discovery of the disturbance, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions. Such control measure(s) must be maintained and reapplied, if necessary, until the disturbed surface areas are stabilized, in compliance with one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of this rule. Stabilization shall be achieved, per ~~this~~ such control measure, within eight months after ~~the~~ such control measure has been implemented.

d. Uniformly apply and maintain surface gravel, in compliance with one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of this rule.

e. Apply and maintain an alternative control measure approved in writing by the Control Officer and the Administrator of the ~~Environmental Protection Agency (EPA)~~ EPA.

302.2 Stabilization Limitations:

a. A visible crust shall be implemented, as determined by Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. A threshold friction velocity (TFV), corrected for non-erodible elements of 100 cm/second or higher, shall be implemented, as determined by Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules; or

c. Flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50% shall be implemented, as determined by Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules; or

d. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30% shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

e. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

f. A percent cover that is equal to or greater than 10% for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules; or

g. An alternative test method approved in writing by the Control Officer and the Administrator of the EPA shall be implemented.

303 UNPAVED PARKING LOTS: The owner and/or operator of an unpaved parking lot shall implement one of the control measures described in ~~subsection 303.1~~ Section 303.1 of this rule on any surface area(s) of the lot on which vehicles enter, park, and exit. For unpaved parking lots that are utilized intermittently, for a period of 35 days or less during the calendar year, the owner and/or operator shall implement one of the control measures described in Section 303.1 of this rule, during the period that the unpaved parking lots are utilized for vehicle parking. ~~For the purpose of this rule, the owner and/or operator of an unpaved parking lot on which vehicles are parked no more than 35 days per year, excluding days on which ten or fewer vehicles enter, shall implement either the control measure described in subsection 303.1(b) or subsection 303.1(c) below for the duration of time that over 100 vehicles enter and/or park on such unpaved parking lot. In addition, for the purpose of this rule, such~~ For the purpose of this rule, such control ~~measures~~ measure(s) shall be considered effectively implemented when the unpaved parking lot meets the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 303.2~~ Section 303.2 of this rule.

303.1 Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 303.2~~ Section 303.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 303.2~~ Section 303.2 of this rule.

303.2 Stabilization ~~Limitation~~ And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from unpaved parking lots do not exceed 20% opacity and ~~do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 8% silt content, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.~~ meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 8%.

304 UNPAVED ROADWAYS (INCLUDING ALLEYS): If a person allows 150 vehicles or more per day to use an unpaved roadway (including alleys) in the PM_{10} nonattainment area, then such person shall first implement one of the ~~best available~~ control measures described in ~~subsection 304.1~~ Section 304.1 of this rule. ~~Existing unpaved roadways (including alleys) with vehicular traffic of 250 vehicles or more per day must be stabilized by one of the best available control measures described in subsection 304.1 of this rule by June 10, 2000. Existing unpaved roadways (including alleys) with vehicular traffic of 150 vehicles or more per day must be stabilized by one of the best available control measures described in subsection 304.1 of this rule by June 10, 2004.~~ For the purpose of this rule, ~~the best available~~ such control ~~measures~~ measure(s) shall be considered effectively implemented when the unpaved roadway (including alleys) ~~complies with subsection 304.3~~ meets the stabilization and opacity limitation described in Section 304.2 of this rule.

304.1 ~~Best Available~~ Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 304.3~~ Section 304.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 304.3~~ Section 304.2 of this rule.

~~304.2 Implementation Of Best Available Control Measures: For the purpose of this rule, best available control measures shall be considered effectively implemented, under the following conditions:~~

~~a. The unpaved roadway (including alleys) meets the stabilization limitation described in subsection 304.3 of this rule; and, where applicable,~~

~~b. Existing unpaved roadways (including alleys) are stabilized according to the following schedule:~~

~~(1) Roadways with vehicular traffic of 250 vehicles or more per day are stabilized by June 10, 2000.~~

~~(2) Roadways with vehicular traffic of 150 vehicles or more per day are stabilized by June 10, 2004.~~

~~304.3~~ 304.2 Stabilization ~~Limitation~~ And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from unpaved roadways (including alleys) do not exceed 20% opacity and ~~do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 6% silt content, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization For Unpaved Roads And Unpaved Parking Lots) of these rules.~~ meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 6%.

305 ~~COMMERCIAL~~ FEEDLOTS AND/OR ~~COMMERCIAL~~ LIVESTOCK AREAS: The owner and/or operator of any ~~commercial~~ feedlot and/or ~~commercial~~ livestock area shall implement one of the control measures described in ~~subsection 305.1~~ Section 305.1 of this rule. For the purpose of this rule, such control measure(s) shall be considered effectively implemented when the feedlot and/or livestock area meets the opacity limitation described in Section 305.2 of this rule.

305.1 Control Measures:

a. Apply dust suppressants, in compliance with the ~~stabilization~~ opacity limitation described in ~~subsection 305.2~~ Section 305.2 of this rule.

b. Uniformly apply and maintain surface gravel, in compliance with the ~~stabilization~~ opacity limitation described in ~~subsection 305.2~~ Section 305.2 of this rule.

c. Install shrubs and/or trees within 50 feet to 100 feet of animal pens, in compliance with the ~~stabilization~~ opacity limitation described in ~~subsection 305.2~~ Section 305.2 of this rule.

305.2 ~~Stabilization~~ Opacity Limitation: ~~No fugitive dust plume emanating from commercial feedlots and/or commercial livestock areas shall exceed 20% opacity~~ For the purpose of this rule, control measures shall be considered effectively implemented when opacity observations for fugitive dust emissions from feedlots and /or livestock areas do not exceed 20% opacity, as determined by Appendix C, Section 3 (Visual Determination Of Opacity Of Emissions From Sources For Time-Average Regulations) of these rules.

306 EROSION-CAUSED DEPOSITION OF BULK MATERIALS ONTO PAVED SURFACES: In the event that erosion-caused deposition of bulk materials or other materials occurs on any adjacent paved roadway or paved parking lot, the owner and/or operator of the property from which the deposition eroded shall implement both of the control measures described in ~~subsection 306.1~~ Section 306.1 of this rule. ~~Such~~ For the purpose of this rule, such control

measures shall be considered effectively implemented when the deposition meets the ~~stabilization~~ opacity limitation described in ~~subsection 306.2~~ Section 306.2 of this rule. Exceedances of the opacity ~~limit~~ limitation, due to erosion-caused deposition of bulk materials onto paved surfaces, shall constitute a violation of the opacity ~~limit~~ limitation.

306.1 Control Measures:

a. Remove any and all such deposits by utilizing the appropriate control measures within 24 hours of the deposits' identification or prior to the resumption of traffic on pavement, where the pavement area has been closed to traffic; and

b. Dispose of deposits in such a manner so as not to cause another source of fugitive dust.

306.2 ~~Stabilization~~ Opacity Limitation: For the purpose of this rule, control measures shall be considered effectively implemented when ~~stabilization~~ opacity observations for fugitive dust emissions from erosion-caused deposition of bulk materials onto paved surfaces do not exceed 20% opacity, as described in Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.

307 EASEMENTS, RIGHTS-OF-WAY, AND ACCESS ROADS FOR UTILITIES (ELECTRICITY, NATURAL GAS, OIL, WATER, AND GAS TRANSMISSION): If ~~a~~ ~~person~~ an owner and/or operator allows 150 vehicles or more per day to use an easement, right-of-way, and access road for utilities (electricity, natural gas, oil, water, and gas transmission) in the PM_{10} nonattainment area, then such ~~person~~ owner and/or operator shall first implement one of the control measures described in ~~subsection 307.1~~ Section 307.1 of this rule. For the purpose of this rule, ~~the~~ such control ~~measures~~ measure(s) shall be considered effectively implemented, when the easement, right-of-way, and access road for utilities (electricity, natural gas, oil, water, and gas transmission) ~~complies with subsection 307.2~~ meet the stabilization and opacity limitation described in Section 307.2 of this rule.

307.1 Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 307.2~~ Section 307.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 307.2~~ Section 307.2 of this rule.

307.2 Stabilization ~~Limitation~~ And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from easements, rights-of-way, and access roads for utilities (electricity, natural gas, oil, water, and gas transmission) do not exceed 20% opacity and ~~do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 6% silt content, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.~~ meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is not equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 6%.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS (NOT APPLICABLE)

SECTION 500 - MONITORING AND RECORDS

501 STABILIZATION OBSERVATIONS:

501.1 Stabilization observations for unpaved parking lots and/or unpaved roadways (including alleys) shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.

501.2 Stabilization observations for an open area and vacant lot shall be conducted in accordance with the following:

a. Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules, where the threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements is 100 cm/second or higher; or

c. Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules, where flat vegetation cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) is equal to at least 50%; or

d. Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules, where standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) is equal to or greater than 30%; or

e. Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules, where the standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) is equal to or greater than 10% and where the threshold friction velocity, corrected for non-erodible elements, is equal to or greater than 43 cm/second; or

f. Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules where a percent cover is equal to or greater than 10% for non-erodible elements.

g. An alternative test method approved in writing by the Control Officer and the Administrator of the EPA.

502 RECORDKEEPING: Any person subject to the requirements of this rule shall compile and retain records that provide evidence of control measure application (i.e., receipts and/or purchase records). ~~The records should~~ Such person shall describe, in the records, the type of treatment or control measure, extent of coverage, and date applied. Upon verbal or written request by the Control Officer, such person shall provide the records and supporting documentation ~~shall be provided~~ within 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, ~~records shall be provided~~ such person shall provide the records without delay.

503 RECORDS RETENTION: Copies of the records required by Section 502 (Recordkeeping) of this rule shall be retained for at least one year.

Appendix 2

Agenda Activity:	**Action**	**Agenda Number:**	**C-85-05-004-0-00**		
Department:	**Air Quality**				
Category:	**Regional Devlopment Servics**				
Contact:	**Suzanne Gray**	**Phone: 506-6747**		**Continued from:**	**01/05/2005**
Return to:	**Suzanne Gray**	**Phone: 506-6747**			
Location:	**1001 N. Central, Suite 500**				

Action Requested:
Set a public hearing, as required by Arizona Revised Statutes (ARS) §49-479(b), to solicit comments on proposed revisions to Maricopa County Air Pollution Control Regulation Rule 310.01 (Fugitive Dust From Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways) and on submitting the rule as a revision to the (Arizona) State Implementation Plan (SIP). Following the public hearing, the Board is requested to adopt proposed revisions to Maricopa County Air Pollution Control Regulations Rule 310.01 and to submit the rule as a revision to the (Arizona) State Implementation Plan.

Complete description of action requested:
Rule 310.01 (Fugitive Dust From Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways) limits the emission of particulate matter (PM10) into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways that are not regulated by Rule 310 (Fugitive Dust) of the Maricopa County Air Pollution Control Regulations and that do not require a permit nor a Dust Control Plan. Maricopa County adopted Rule 310.01 in June 1999 and revised Rule 310.01 in February 2000, in order to make Rule 310.01 approvable to the Environmental Protection Agency (EPA) as a replacement to the Federal Implementation Plan (FIP) and so that Rule 310.01 could be incorporated into the State Implementation Plan (SIP). Maricopa County is again revising Rule 310.01 to address commitments proposed in the Salt River PM10 State Implementation Plan (SIP) Revision. Other revisions to Rule 310.01 improve clarity and correct typographical and formatting errors.

Performance Information:
Program: Air Quality
Activity: Air Quality Monitoring and Compliance
Measure: # of annual earthmoving activity service inspections completed
Anticipated results: Approval of this item will increase the number of inspections completed.

Expenditure Impact by FY(s):
No Impact

Routing: Meeting Date: 02/16/2005	
Legend X=Pending A=Approved R=Rejected	
LEGAL	OMB
A	A

There are no Agenda Notes for agenda item C-85-05-004-0-00

Status for Agenda Number C-85-05-004-0-00

Dept Head Approval	Approved	JOY M. RICH	12/21/2004 4:11:46 PM
OMB	Approved	DON O. TELLIS	12/22/2004 8:34:00 AM
Legal	Approved	DANIEL R. BRENDEN	12/22/2004 11:39:47 AM
County Administrator's Office	Approved	CHRISTINE M. PINUELAS	1/10/2005 1:16:48 PM
Board of Supervisors	Approved	LORI A. PACINI	02/16/2005

NOTICE OF FINAL RULEMAKING
MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
REGULATION III
RULE 310.01 – FUGITIVE DUST FROM OPEN AREAS, VACANT LOTS, UNPAVED PARKING LOTS, AND UNPAVED ROADWAYS
PREAMBLE

1. Sections affected — Rulemaking action
   Rule 310.01, all sections — Amend

2. Statutory authority for the rulemaking:
   Authorizing statutes: Arizona Revised Statutes, Title 49, Chapter 3, Article 3, Sections 479 and 480 (A.R.S. § 49-479, A.R.S. §49-480)
   Implementing statute: Arizona Revised Statutes, Title 49, Chapter 1, Article 1, Section 112 (A.R.S. §49-112)

3. The effective date of the rules:
   Date of adoption: February 17, 2005

4. List of all previous notices appearing in the register addressing the proposed rules:
   a. Notice of Rulemaking Docket Opening: Volume #10, A.A.R. Issue #23, p. 2266, June 4, 2004
   b. Notice of Proposed Rulemaking: Volume #10, A.A.R Issue #44, p. 4387, October 29, 2004

5. Name and address of agency personnel with whom persons may communicate regarding the rulemaking:
   Name: Johanna M. Kuspert or Jo Crumbaker
   Address: 1001 N. Central Ave, Suite 695 Phoenix, AZ 85004
   Phone Number: 602.506.3476 or 602.506.6705
   Fax Number: 602.506.6179
   Email Address: jkuspert@mail.maricopa.gov or jcrumbak@mail.maricopa.gov

6. An explanation of the rule, including the department's reasons for initiating the rules:
   Rule 310.01 (Fugitive Dust From Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways) limits the emission of particulate matter (PM_{10}) into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways that are not regulated by Rule 310 (Fugitive Dust) of the Maricopa County Air Pollution Control Regulations and that do not require a permit nor a Dust Control Plan.

   Maricopa County adopted Rule 310.01 in June 1999 and revised Rule 310.01 in February 2000, in order to make Rule 310.01 approvable to the Environmental Protection Agency (EPA) as a replacement to the Federal Implementation Plan (FIP) and so that Rule 310.01 could be incorporated into the State Implementation Plan (SIP). In February 2005, Maricopa County revised Rule 310.01 to address commitments proposed in the Salt River PM_{10} State Implementation Plan (SIP) Revision. Other revisions to Rule 310.01 improved clarity and corrected typographical and formatting errors.

7. Demonstration of compliance with A.R.S. §49-112:
   Under A.R.S. §49-479(c), a county may not adopt a rule that is more stringent than the rules adopted by the director of the Arizona Department Of Environmental Quality (ADEQ) for similar sources unless it demonstrates compliance with the requirements of A.R.S. §49-112. Under that statute:

When authorized by law, a county may adopt a rule, ordinance, or other regulation that is more stringent than or in addition to a provision of this title or rule adopted by the director or any board or commission authorized to adopt rules pursuant to this title if all the following conditions are met:

1. The rule, ordinance or other regulation is necessary to address a peculiar local condition;
2. There is credible evidence that the rule, ordinance or other regulation is either:
   (a) Necessary to prevent a significant threat to public health or the environment that results from a peculiar local condition and is technically and economically feasible
   (b) Required under a federal statute or regulation, or authorized pursuant to an intergovernmental agreement with the federal government to enforce federal statutes or regulations if the county rule, ordinance or other regulation is equivalent to federal statutes or regulations.

A.R.S. §49-112 (A).

Maricopa County revised Rule 310.01 in order to address a peculiar local condition: the designation of Maricopa County as a serious nonattainment area for PM_{10} and to address Best Available Control Measures (BACM) and Most Stringent Measures (MSM) proposed in the Salt River PM_{10} State Implementation Plan (SIP) Revision.

Maricopa County is the only PM_{10} serious nonattainment area in Arizona, consequently stronger regulations must be adopted in this area to address a serious health threat. Because of this, the revisions comply with A.R.S. §49-112 (A)(1). Additionally because Rule 310.01 is part of the Arizona State Implementation Plan for the control of PM_{10}, the regulation is federally enforceable and changes were required under 40 C.F.R. 51.120 (c)(102) to effect enforceable commitments made by Maricopa County. Therefore the rule revisions were made pursuant to A.R.S. §49-112 (2).

In addition, the purpose of the Salt River PM_{10} SIP Revision is to meet the Environmental Protection Agency's (EPA's) requirements to implement control measures committed to in the Salt River Plan and to demonstrate attainment of the 24-hour federal standard for coarse particulate matter air pollution by December 31, 2006 in the Salt River Study Area. The EPA requires that control measures applied to significant sources of PM_{10} emissions in the Salt River Study Area be applied to similar sources throughout the Maricopa County serious PM_{10} nonattainment area. The revisions to Rule 310.01 meet such requirements.

8. A reference to any study relevant to the rule that the agency reviewed and either proposes to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

"Proposed Revised PM_{10} State Implementation Plan For The Salt River Area", Air Quality Division, Arizona Department Of Environmental Quality, June 2004.
Available for review at: http://www.adeq.state.az.us/environ/air/plan/download/proposedsip.pdf
Or contact:
Diane Arnst
Arizona Department Of Environmental Quality
Mailcode: 3415A-3
ADEQ Central Office
1110 West Washington Street
Phoenix, Arizona 85007

602.771.2375

9. Summary of the economic, small business, and consumer impact:

Economic Impacts On Regulated Sources:

The revisions to Rule 310.01 will have a minimal economic impact on regulated sources.

Economic Impacts On County Resources:

With the revisions to Rule 310.01, Maricopa County will provide additional inspection and enforcement personnel.

In 1998, Maricopa County had four inspectors, one supervisor, and one enforcement officer on staff to enforce 1,700 earthmoving permits. In 2000, Maricopa County increased the number of personnel working on Maricopa County Rule 310 (Fugitive Dust) compliance to eight inspectors, one supervisor, one coordinator, two enforcement officers, one aide, and one county attorney. In 2000, Maricopa County was responsible for 2,500 earthmoving permits. Currently, Maricopa County is responsible for 4,150 earthmoving permits.

By September 2004, Maricopa County completed three workload analyses. The first analysis focused on three to five inspections per year at earthmoving sites ten acres or larger in size and one inspection per year at smaller sites for compliance with Maricopa County Rule 310 (Fugitive Dust). The second analysis focused on inspections of 5,300 vacant lots per year, which constitutes 20% of the 26,446 vacant lots identified as of October 2003, for compliance with Maricopa County Rule 310.01 (Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways).

The third analysis focused on increasing inspection for compliance with Maricopa County Rule 316 (Nonmetallic Mineral Processing) to four times per year. The workload analysis also addressed proposed enforcement for Maricopa County's proposed new Rule 325 (Brick And Structural Clay Products Manufacturing), which will provide PM_{10} controls for structural clay and brick manufacturers.

These analyses are expected to result in identification of the number of additional personnel and salaries/fringe benefits totals necessary for an effective enforcement effort to attain the PM_{10} standard. Interim funding to enable accelerated hiring of some additional personnel has been explored and identified. A resolution committing Maricopa County to a funding mechanism and specified number of enforcement positions has been added. Following adoption of the resolution, Maricopa County will hire additional personnel. In the interim, Maricopa County will revise fees through revisions to Maricopa County Rule 280 (Fees) to fund the additional positions.

Health Costs:

Because Maricopa County is a serious nonattainment area for PM_{10}, which these revisions address, it is imperative to consider the medical and social costs of failing to take steps toward the improvement of the air quality. Adverse health effects from air pollution result in a number of economic and social consequences, including:

1. Medical Costs - Personal out-of-pocket expenses of the affected individual (or family), plus costs paid by insurance or Medicare, for example.
2. Work Loss – Lost personal income, plus lost productivity whether the individual is compensated for the time or not. For example, some individuals may perceive no income loss because they receive sick pay, but sick pay is a cost of business and reflects lost productivity.
3. Increased Costs For Chores And Caregiving – Special caregiving and services that are not reflected in medical costs. These costs may occur, because some health effects reduce the affected individual's ability to undertake some or all normal chores. The affected individual may require extra care.

4. Other Social And Economic Costs – Restrictions on or reduced enjoyment of leisure activities, increased discomfort or inconvenience, increased pain and suffering, anxiety about the future, and concern and inconvenience to family members.

Rule Impact Reduction On Small Businesses:
A.R.S. §41-1055 requires Maricopa County to reduce the impact on small businesses by using certain methods when they are legal and feasible in meeting the statutory objectives of the rulemaking. A small business is defined in A.R.S. §41-1001 as a "concern, including its affiliates, which is independently owned and operated, which is not dominant in its field and which employs fewer than one hundred full-time employees or which had gross annual receipts of less than four million dollars in its last fiscal year. For purposes of a specific rule, an agency may define small business to include more persons if it finds that such a definition is necessary to adapt the rule to the needs and problems of small businesses and organizations." Maricopa County solicits input from stakeholders (i.e., small businesses) regarding administrative costs associated with compliance with proposed rulemakings and any other information relevant to the economics, small business, and consumer impact statement. Because of the nature of the revisions to Rule 310.01, small businesses will be affected only minimally.

Conclusion:
Because the changes to Rule 310.01 essentially clarify requirements that already exist, there is only a minimal economic impact on regulated sources, county resources, small businesses, and the public at large.

10. Description of the changes between the proposed rules, including supplemental notices, and final rules:
    No changes were made in Rule 310.01, since the text of the proposed rule was published in the Notice Of Proposed Rulemaking on October 29, 2004.

11. Summary of the comments made regarding the rules and the department's response to them:
    No comments were received regarding proposed Rule 310.01.

12. Any other matters prescribed by the statute that are applicable to the specific department or to any specific rule or class of rules:
    None

13. Incorporations by reference and their location in the rules:

Incorporation By Reference	Location
Appendix C, Section 2.1	Rule 310.01, Section 501.1
Appendix C, Section 2.3	Rule 310.01, Section 501.2(a)
Appendix C, Section 2.4	Rule 310.01, Section 501.2(b)
Appendix C. Section 2.5	Rule 310.01, Section 501.2(c)
Appendix C, Section 2.6	Rule 310.01, Section 501.2(d) and (e)
Appendix C, Section 2.7	Rule 310.01, Section 501.2(f)

14. Was this rule previously an emergency rule?
    No

15. The full text of the rules follows:

REGULATION III - CONTROL OF AIR CONTAMINANTS
RULE 310.01
FUGITIVE DUST FROM
OPEN AREAS, VACANT LOTS, UNPAVED PARKING LOTS, AND UNPAVED ROADWAYS
INDEX

Adopted 06/16/99
Revised 02/16/00

MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III - CONTROL OF AIR CONTAMINANTS
RULE 310.01
FUGITIVE DUST FROM
OPEN AREAS, VACANT LOTS, UNPAVED PARKING LOTS, AND UNPAVED ROADWAYS

SECTION 100 - GENERAL

101 PURPOSE: To limit the emission of particulate matter into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways which are not regulated by Rule 310 (Fugitive Dust ~~Sources~~) of these rules and which do not require a permit nor a Dust Control Plan. The effect of this rule shall be to minimize the amount of fine particulate matter (PM_{10}) entrained into the ambient air as a result of the impact of human activities by requiring measures to prevent, reduce, or mitigate particulate matter emissions.

102 APPLICABILITY: The provisions of this rule shall apply to open areas, vacant lots, unpaved parking lots, and unpaved roadways which are not regulated by Rule 310 (Fugitive Dust ~~Sources~~) of these rules and which do not require a permit nor a Dust Control Plan. In addition, the provisions of this rule shall apply to any open area or vacant lot that is not defined as agricultural land and is not used for agricultural purposes according to Arizona Revised Statutes (ARS) §42-12151 and ARS §42-12152. The provisions of this rule shall not apply to normal farm cultural practices according to ARS §49-457 and ARS §49-504.4.

SECTION 200 - DEFINITIONS: ~~For the purpose of this rule, the following definitions shall apply. See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule.~~ See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule. For the purpose of this rule, the following definitions shall apply:

201 BULK MATERIAL - Any material, including, but not limited to, earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than 2 inches in length or diameter (i.e., aggregate base course (ABC)), dirt, mud, demolition debris, cotton, trash, cinders, pumice, saw dust, feeds, grains, fertilizers, fluff (from shredders), and dry concrete, that are capable of producing fugitive dust.

202 CHEMICAL/ORGANIC STABILIZER - Any non-toxic chemical or organic dust suppressant, other than water, which meets any specifications, criteria, or tests required by any Federal, State, or local water agency and is not prohibited for use by any applicable law, rule, or regulation.

~~203 COMMERCIAL FEEDLOTS AND/OR COMMERCIAL LIVESTOCK AREAS - Any operation directly related to feeding animals, displaying animals, racing animals, exercising animals, and/or for any other such activity, for the primary purpose of livelihood.~~

~~204~~ 203 CONTROL MEASURE - A technique, practice, or procedure used to prevent or minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust.

~~205~~ 204 DISTURBED SURFACE AREA - A portion of the earth's surface (or material placed thereupon) which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition, thereby increasing the potential for the emission of fugitive dust. For the purpose of this rule, an area is considered to be a disturbed surface area until the activity that caused the disturbance has been completed and the disturbed surface area meets the standards described in ~~Section 501~~ Section 300 of this rule, as applicable.

~~206~~ 205 DUST SUPPRESSANT - Water, hygroscopic material, solution of water and chemical surfactant, foam, non-toxic chemical stabilizer, or any other dust palliative, which is not prohibited for ground surface application by the Environmental Protection Agency (EPA) or

the Arizona Department of Environmental Quality (ADEQ), or any applicable law, rule, or regulation, as a treatment material for reducing fugitive dust emissions.

206 FEEDLOTS AND/OR LIVESTOCK AREAS - Any area on which an operation directly related to feeding animals, displaying animals, racing animals, exercising animals, and/or for any other such activity exists.

207 FUGITIVE DUST - The particulate matter~~, which is~~ not collected by a capture system, ~~which~~ that is entrained in the ambient air and ~~which~~ is caused from human and/or natural activities, such as, but not limited to, movement of soil, vehicles, equipment, blasting, and wind. For the purpose of this rule, fugitive dust does not include particulate matter emitted directly from the exhaust of motor vehicles and other internal combustion engines, from portable brazing, soldering, or welding equipment, and from piledrivers, and does not include emissions from process and combustion sources that are subject to other rules in Regulation III (Control Of Air Contaminants) of these rules.

208 MOTOR VEHICLE - A self-propelled vehicle for use on the public roads and highways of the State of Arizona and required to be registered under the Arizona State Uniform Motor Vehicle Act, including any non-motorized attachments, such as but not limited to, trailers or other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.

209 NORMAL FARM CULTURAL PRACTICE - All activities by the owner, lessee, agent, independent contractor, and/or supplier conducted on any facility for the production of crops and/or nursery plants. Disturbances of the field surface caused by turning under stalks, tilling, leveling, planting, fertilizing, or harvesting are included in this definition.

210 OFF-ROAD VEHICLE - Any self-propelled conveyance specifically designed for off-road use, including, but not limited to, off-road or all-terrain equipment, trucks, cars, motorcycles, motorbikes, or motorbuggies.

211 OPEN AREAS AND VACANT LOTS - Any of the following described in ~~subsection 211.1~~ Section 211.1 through ~~subsection 211.4~~ Section 211.4 of this rule. For the purpose of this rule, vacant portions of residential or commercial lots that are immediately adjacent and owned and/or operated by the same individual or entity are considered one vacant open area or vacant lot.

211.1 An unsubdivided or undeveloped tract of land adjoining a developed or a partially developed residential, industrial, institutional, governmental, or commercial area.

211.2 A subdivided residential, industrial, institutional, governmental, or commercial lot~~, which~~ that contains no approved or permitted buildings or structures of a temporary or permanent nature.

211.3 A partially developed residential, industrial, institutional, governmental, or commercial lot.

211.4 A tract of land, in the PM_{10} nonattainment area, adjoining agricultural property.

212 OWNER AND/OR OPERATOR - Any person who owns, leases, operates, controls, or supervises a fugitive dust source subject to the requirements of this rule.

213 PAVE - To apply and maintain asphalt, concrete, or other similar material to a roadway surface (i.e., asphaltic concrete, concrete pavement, chip seal, or rubberized asphalt).

214 PM_{10} NONATTAINMENT AREA - An area designated by the EPA as exceeding national ambient air quality standards based upon data collected thru air quality monitoring. The geographical boundary of Maricopa County's PM_{10} nonattainment area is defined as the rectangle determined by and including the following townships and ranges: T6N, R3W; T6N, R7E; T2S, R3W; T2S, R7E; and T1N, R8E. Maricopa County's PM_{10} nonattainment area includes the following cities: Surprise, Peoria, Glendale, Phoenix, Scottsdale, Tempe, Mesa, Gilbert, Chandler, Avondale, Buckeye, and Goodyear.

~~214~~ 215 PUBLIC ROADWAYS - Any roadways that are open to public travel.

~~215~~ 216 UNPAVED PARKING LOT - Any area larger than 5,000 square feet that is not paved and that is used for parking, maneuvering, or storing motor vehicles.

~~216~~ 217 UNPAVED ROADWAY (INCLUDING ALLEYS) - A road that is not paved and that is owned by Federal, State, county, municipal, or other governmental or quasi-governmental agencies. For the purpose of this rule, an unpaved roadway (including alleys) is not a horse trail, hiking path, bicycle path, or other similar path used exclusively for purposes other than travel by motor vehicles.

~~217~~ 218 VACANT LOT - The definition of vacant lot is included in Section 211 (Definition Of Open Areas And Vacant Lots) of this rule.

SECTION 300 - STANDARDS

301 VEHICLE USE IN OPEN AREAS AND VACANT LOTS: If open areas and vacant lots are 0.10 acre or larger and have a cumulative of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, then the owner and/or operator of such open areas and vacant lots shall implement one of the control measures described in ~~subsection 301.1~~ Section 301.1 of this rule within 60 calendar days following the initial discovery of vehicle use on open areas and vacant lots. Within 30 calendar days following the initial discovery by the Control Officer of vehicle use on open areas and vacant lots, the owner and/or operator of such open areas and vacant lots shall provide in writing to the Control Officer a description and date of the control measure(s) to be implemented to prevent such vehicle use on open areas and vacant lots. For the purpose of this rule, such control ~~measures~~ measure(s) shall be considered effectively implemented when the open areas and vacant lots meet one of the stabilization limitations described in ~~subsection 301.2~~ Section 301.2 of this rule. Once a control measure in Section 301.1 of this rule has been effectively implemented, then such open area or vacant lot is subject to the requirements of Section 302 (Open Areas And Vacant Lots) of this rule. Use of or parking on open areas and vacant lots by the owner and/or operator of such open areas and vacant lots and/or landscape maintenance of such open areas and vacant lots shall not be considered vehicle use in open areas and vacant lots, although such open areas and vacant lots shall still meet the stabilization limitations described in Section 301.2 of this rule. For the purpose of this rule, landscape maintenance does not include grading, trenching, nor any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

301.1 Control Measures:

a. Prevent motor vehicle and/or off-road vehicle trespassing, parking, and/or access, by installing barriers, curbs, fences, gates, posts, signs (written in English and Spanish and in compliance with ordinance(s) of local jurisdictions), shrubs, trees, or other effective control measures. ~~Once vehicular traffic has been restricted from an open area or a vacant lot, such open area or vacant lot is no longer subject to the requirements of Section 301 of this rule, but rather such open area and vacant lot is subject to the requirements of Section 302 (Open Areas And Vacant Lots) of this rule.~~

b. Uniformly apply and maintain surface gravel or chemical/organic stabilizers to all areas disturbed by motor vehicles and/or off-road vehicles in compliance with one of the stabilization limitations described in ~~subsection 301.2~~ Section 301.2 of this rule.

c. Apply and maintain an alternative control measure approved in writing by the Control Officer and the Administrator of the ~~Environmental Protection Agency (EPA)~~ EPA.

301.2 Stabilization Limitations:

a. A visible crust shall be implemented, as determined by Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. A threshold friction velocity (TFV) corrected for non-erodible elements of 100 cm/second or higher shall be implemented, as determined by Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules; or

c. Flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50% shall be implemented, as determined by Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules; or

d. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30% shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

e. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

f. A percent cover that is equal to or greater than 10% for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules; or

g. An alternative test method approved in writing by the Control Officer and the Administrator of the ~~Environmental Protection Agency (EPA)~~ EPA shall be implemented.

302 OPEN AREAS AND VACANT LOTS: If open areas and vacant lots have 0.5 acre or more of disturbed surface area and remain unoccupied, unused, vacant, or undeveloped for more than 15 days, then the owner and/or operator of such open areas and vacant lots shall implement one of the control measures described in ~~subsection 302.1~~ Section 302.1 of this rule within 60 calendar days following the initial discovery of the disturbance on the open areas and vacant lots. Within 30 calendar days following the initial discovery by the Control Officer of the disturbance on the open areas and vacant lots, the owner and/or operator of such open areas and vacant lots shall provide in writing to the Control Officer a description and date of the control measure(s) to be implemented. For the purpose of this rule, such control ~~measures~~ measure(s) shall be considered effectively implemented when the open areas and vacant lots meet one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of this rule. Should an open area or vacant lot on which no activity is occurring contain more than one type of disturbance, soil, vegetation, or other characteristics that are visibly distinguishable, then each representative surface shall be tested separately for stability, in an area that represents a random portion of the overall disturbed conditions of the site, according to the appropriate test methods in Appendix C of these rules and included or eliminated from the total size assessment of disturbed surface area(s) depending on test method results.

302.1 Control Measures:

a. Establish vegetative ground cover on all disturbed surface areas within 60 calendar days following the initial discovery of the disturbance. Such control measure(s) must be maintained and reapplied, if necessary, until the disturbed surface areas are stabilized, in compliance with one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of

this rule. Stabilization shall be achieved, per this control measure, within eight months after the control measure has been implemented.

b. Apply a dust suppressant to all disturbed surface areas, in compliance with one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of this rule.

c. Restore all disturbed surface areas within 60 calendar days following the initial discovery of the disturbance, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions. Such control measure(s) must be maintained and reapplied, if necessary, until the disturbed surface areas are stabilized, in compliance with one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of this rule. Stabilization shall be achieved, per ~~this~~ such control measure, within eight months after ~~the~~ such control measure has been implemented.

d. Uniformly apply and maintain surface gravel, in compliance with one of the stabilization limitations described in ~~subsection 302.2~~ Section 302.2 of this rule.

e. Apply and maintain an alternative control measure approved in writing by the Control Officer and the Administrator of the ~~Environmental Protection Agency (EPA)~~ EPA.

302.2 Stabilization Limitations:

a. A visible crust shall be implemented, as determined by Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. A threshold friction velocity (TFV), corrected for non-erodible elements of 100 cm/second or higher, shall be implemented, as determined by Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules; or

c. Flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50% shall be implemented, as determined by Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules; or

d. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30% shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

e. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

f. A percent cover that is equal to or greater than 10% for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules; or

g. An alternative test method approved in writing by the Control Officer and the Administrator of the EPA shall be implemented.

303 UNPAVED PARKING LOTS: The owner and/or operator of an unpaved parking lot shall implement one of the control measures described in ~~subsection 303.1~~ Section 303.1 of this rule on any surface area(s) of the lot on which vehicles enter, park, and exit. For unpaved parking lots that are utilized intermittently, for a period of 35 days or less during the calendar year, the owner and/or operator shall implement one of the control measures described in Section 303.1 of this rule, during the period that the unpaved parking lots are utilized for vehicle parking. ~~For the purpose of this rule, the owner and/or operator of an unpaved parking lot on which vehicles are parked no more than 35 days per year, excluding days on which ten or fewer vehicles enter, shall implement either the control measure described in subsection 303.1(b) or subsection 303.1(c) below for the duration of time that over 100 vehicles enter and/or park on such unpaved parking lot. In addition, for the purpose of this rule, such~~ For the purpose of this rule, such control ~~measures~~ measure(s) shall be considered effectively implemented when the unpaved parking lot meets the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 303.2~~ Section 303.2 of this rule.

303.1 Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 303.2~~ Section 303.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 303.2~~ Section 303.2 of this rule.

303.2 Stabilization ~~Limitation~~ And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from unpaved parking lots do not exceed 20% opacity and ~~do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 8% silt content, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.~~ meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 8%.

304 UNPAVED ROADWAYS (INCLUDING ALLEYS): If a person allows 150 vehicles or more per day to use an unpaved roadway (including alleys) in the PM_{10} nonattainment area, then such person shall first implement one of the ~~best available~~ control measures described in ~~subsection 304.1~~ Section 304.1 of this rule. ~~Existing unpaved roadways (including alleys) with vehicular traffic of 250 vehicles or more per day must be stabilized by one of the best available control measures described in subsection 304.1 of this rule by June 10, 2000. Existing unpaved roadways (including alleys) with vehicular traffic of 150 vehicles or more per day must be stabilized by one of the best available control measures described in subsection 304.1 of this rule by June 10, 2004.~~ For the purpose of this rule, ~~the best available~~ such control ~~measures~~ measure(s) shall be considered effectively implemented when the unpaved roadway (including alleys) ~~complies with subsection 304.3~~ meets the stabilization and opacity limitation described in Section 304.2 of this rule.

304.1 ~~Best Available~~ Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 304.3~~ Section 304.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 304.3~~ Section 304.2 of this rule.

~~304.2 Implementation Of Best Available Control Measures: For the purpose of this rule, best available control measures shall be considered effectively implemented, under the following conditions:~~

~~a. The unpaved roadway (including alleys) meets the stabilization limitation described in subsection 304.3 of this rule; and, where applicable,~~

~~b. Existing unpaved roadways (including alleys) are stabilized according to the following schedule:~~

~~(1) Roadways with vehicular traffic of 250 vehicles or more per day are stabilized by June 10, 2000.~~

~~(2) Roadways with vehicular traffic of 150 vehicles or more per day are stabilized by June 10, 2004.~~

~~304.3~~ 304.2 Stabilization ~~Limitation~~ And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from unpaved roadways (including alleys) do not exceed 20% opacity and ~~do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 6% silt content, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization For Unpaved Roads And Unpaved Parking Lots) of these rules.~~ meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 6%.

305 ~~COMMERCIAL~~ FEEDLOTS AND/OR ~~COMMERCIAL~~ LIVESTOCK AREAS: The owner and/or operator of any ~~commercial~~ feedlot and/or ~~commercial~~ livestock area shall implement one of the control measures described in ~~subsection 305.1~~ Section 305.1 of this rule. For the purpose of this rule, such control measure(s) shall be considered effectively implemented when the feedlot and/or livestock area meets the opacity limitation described in Section 305.2 of this rule.

305.1 Control Measures:

a. Apply dust suppressants, in compliance with the ~~stabilization~~ opacity limitation described in ~~subsection 305.2~~ Section 305.2 of this rule.

b. Uniformly apply and maintain surface gravel, in compliance with the ~~stabilization~~ opacity limitation described in ~~subsection 305.2~~ Section 305.2 of this rule.

c. Install shrubs and/or trees within 50 feet to 100 feet of animal pens, in compliance with the ~~stabilization~~ opacity limitation described in ~~subsection 305.2~~ Section 305.2 of this rule.

305.2 ~~Stabilization~~ Opacity Limitation: ~~No fugitive dust plume emanating from commercial feedlots and/or commercial livestock areas shall exceed 20% opacity~~ For the purpose of this rule, control measures shall be considered effectively implemented when opacity observations for fugitive dust emissions from feedlots and /or livestock areas do not exceed 20% opacity, as determined by Appendix C, Section 3 (Visual Determination Of Opacity Of Emissions From Sources For Time-Average Regulations) of these rules.

306 EROSION-CAUSED DEPOSITION OF BULK MATERIALS ONTO PAVED SURFACES: In the event that erosion-caused deposition of bulk materials or other materials occurs on any adjacent paved roadway or paved parking lot, the owner and/or operator of the property from which the deposition eroded shall implement both of the control measures described in ~~subsection 306.1~~ Section 306.1 of this rule. ~~Such~~ For the purpose of this rule, such control

measures shall be considered effectively implemented when the deposition meets the ~~stabilization~~ opacity limitation described in ~~subsection 306.2~~ Section 306.2 of this rule. Exceedances of the opacity ~~limit~~ limitation, due to erosion-caused deposition of bulk materials onto paved surfaces, shall constitute a violation of the opacity ~~limit~~ limitation.

306.1 Control Measures:

a. Remove any and all such deposits by utilizing the appropriate control measures within 24 hours of the deposits' identification or prior to the resumption of traffic on pavement, where the pavement area has been closed to traffic; and

b. Dispose of deposits in such a manner so as not to cause another source of fugitive dust.

306.2 ~~Stabilization~~ Opacity Limitation: For the purpose of this rule, control measures shall be considered effectively implemented when ~~stabilization~~ opacity observations for fugitive dust emissions from erosion-caused deposition of bulk materials onto paved surfaces do not exceed 20% opacity, as described in Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.

307 EASEMENTS, RIGHTS-OF-WAY, AND ACCESS ROADS FOR UTILITIES (ELECTRICITY, NATURAL GAS, OIL, WATER, AND GAS TRANSMISSION): If ~~a~~ ~~person~~ an owner and/or operator allows 150 vehicles or more per day to use an easement, right-of-way, and access road for utilities (electricity, natural gas, oil, water, and gas transmission) in the PM_{10} nonattainment area, then such ~~person~~ owner and/or operator shall first implement one of the control measures described in ~~subsection 307.1~~ Section 307.1 of this rule. For the purpose of this rule, ~~the~~ such control ~~measures~~ measure(s) shall be considered effectively implemented, when the easement, right-of-way, and access road for utilities (electricity, natural gas, oil, water, and gas transmission) ~~complies with subsection 307.2~~ meet the stabilization and opacity limitation described in Section 307.2 of this rule.

307.1 Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 307.2~~ Section 307.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization ~~limitation~~ and opacity limitations described in ~~subsection 307.2~~ Section 307.2 of this rule.

307.2 Stabilization ~~Limitation~~ And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from easements, rights-of-way, and access roads for utilities (electricity, natural gas, oil, water, and gas transmission) do not exceed 20% opacity and ~~do not equal or exceed 0.33 oz/ft^2 silt loading, or do not exceed 6% silt content, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.~~ meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is not equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 6%.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS (NOT APPLICABLE)

SECTION 500 - MONITORING AND RECORDS

501 STABILIZATION OBSERVATIONS:

501.1 Stabilization observations for unpaved parking lots and/or unpaved roadways (including alleys) shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.

501.2 Stabilization observations for an open area and vacant lot shall be conducted in accordance with the following:

a. Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules, where the threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements is 100 cm/second or higher; or

c. Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules, where flat vegetation cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) is equal to at least 50%; or

d. Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules, where standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) is equal to or greater than 30%; or

e. Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules, where the standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) is equal to or greater than 10% and where the threshold friction velocity, corrected for non-erodible elements, is equal to or greater than 43 cm/second; or

f. Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules where a percent cover is equal to or greater than 10% for non-erodible elements.

g. An alternative test method approved in writing by the Control Officer and the Administrator of the EPA.

502 RECORDKEEPING: Any person subject to the requirements of this rule shall compile and retain records that provide evidence of control measure application (i.e., receipts and/or purchase records). ~~The records should~~ Such person shall describe, in the records, the type of treatment or control measure, extent of coverage, and date applied. Upon verbal or written request by the Control Officer, such person shall provide the records and supporting documentation ~~shall be provided~~ within 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, ~~records shall be provided~~ such person shall provide the records without delay.

503 RECORDS RETENTION: Copies of the records required by Section 502 (Recordkeeping) of this rule shall be retained for at least one year.

Appendix 3

NOTICE OF PUBLIC HEARING
FOR MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
AND STATE IMPLEMENTATION PLAN (SIP) REVISIONS

Notice is hereby given that the Maricopa County Board of Supervisors will conduct a public hearing on **February 16, 2005** at **9:00 am** on proposed revisions to the Maricopa County Air Pollution Control Regulations, **Rule 310.01 (Fugitive Dust From Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways)**. The Public Hearing will be held at the Maricopa County Board of Supervisors' Auditorium, 205 West Jefferson Street, Phoenix, Arizona. Call 602-506-0169 for current information. Copies of the final draft rule will be available at least 30 days prior to the hearing for public inspection at the offices of the Maricopa County Air Quality Department, Planning & Analysis Section, 1001 N. Central Ave. #695, Phoenix, AZ., 85004, phone 602-506-3476, and on the internet at http://www.maricopa.gov/envsvc/air/workshops.asp. A sign language interpreter, alternative form materials, or infrared assistive listening devices will be made available upon request with 72 hours notice. Additional reasonable accommodations will be made available to the extent possible within the time frame of the request. Requests should be made to 602-506-3751 or TTY 602-506-2000.

PUBLISH JANUARY 7, 2005 and JANUARY 12, 2005.

Appendix 4

THE RECORD REPORTER

~ SINCE 1914 ~

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Telephone (602) 417-9900 / Fax (602) 417-9910

DIANA NINO
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1001 N. CENTRAL AVE., RM. 200
PHOENIX, AZ 85004-1942

RR#: 766101

NOTICE OF PUBLIC HEARING FOR MARICOPA COUNTY AIR POLLUTION CONTROL EGULATIONS AND STATE IMPLEMENTATION PLAN (SIP) EVISIONS Notice is hereby given that the Maricopa County Board of Supervisors will conduct a public hearing on February 16, 2005 at 9:00 AM on proposed revisions to the Maricopa County Air Pollution Control Regulations, RULE 310.01 (Fugitive Dust From Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways). The Public Hearing will be held at the Maricopa County Board of Supervisors' Auditorium, 205 West Jefferson Street, Phoenix, Arizona. all 602-506-0169 for current information. Copies of the final draft rule will be available at least 30 days prior to the hearing for public inspection at the offices of the Maricopa County Air Quality Department, Planning & Analysis Section, 1001 N. Central Ave. #695, Phoenix, AZ., 85004, phone 602-506-3476, and on the internet at http://www.maricopa.gov/envsvc/air/workshops.asp. A sign language interpreter, alternative form materials, or infrared assistive listening devices will be made available upon request with 72 hours notice. Additional reasonable accommodations will be made available to the extent possible within the time frame of the request. Requests should be made to 602-506-3751 or TTY 602-506-2000.
01/07/05, 01/12/05

RR- 766101#

AFFIDAVIT OF PUBLICATION

Reference #:

Notice Type: MCHRG NOTICE OF HEARING

Ad Description: PUBLIC NOTICE REVISIONS TO RULE 310.01

I, WENDY COOPER, am authorized by the publisher as agent to make this affidavit. Under oath, I state that the following is true and correct.

THE RECORD REPORTER is a newspaper of general circulation published Monday, Wednesday and Friday except legal holidays, in the County of Maricopa, State of Arizona. The copy hereto attached is a true copy of the advertisement as published on the following dates:

01/07/05, 01/12/05

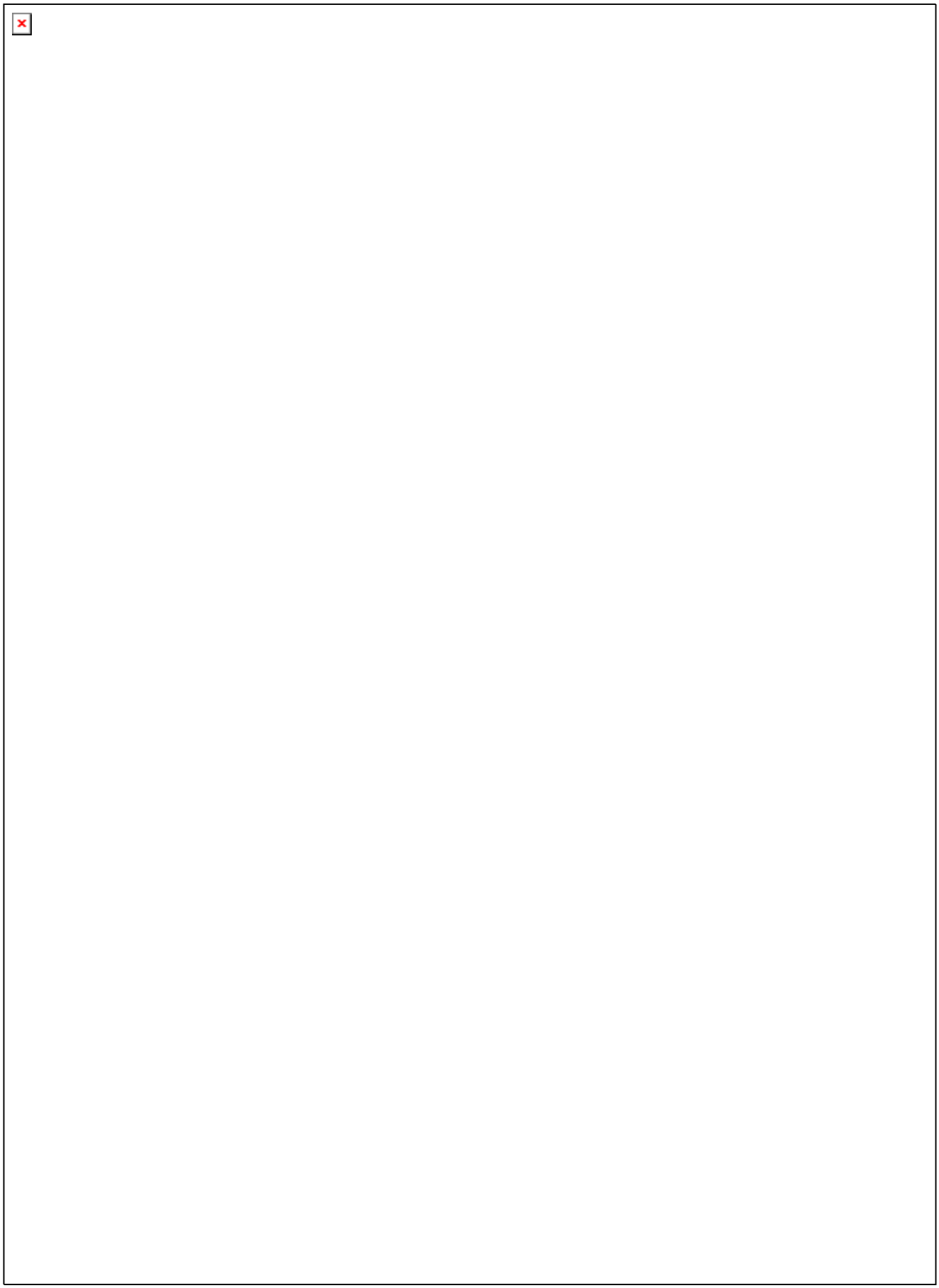
Wendy Cooper

Subscribed and sworn to before me on the 12th day of January, 2005

Diane M Heuel

OFFICIAL SEAL
DIANE M. HEUEL
Notary Public State of Arizona
MARICOPA COUNTY
My Comm. Expires Oct 31 2006

Appendix 5



Appendix 6

REGULATION III - CONTROL OF AIR CONTAMINANTS
RULE 310.01
FUGITIVE DUST FROM
OPEN AREAS, VACANT LOTS, UNPAVED PARKING LOTS, AND UNPAVED ROADWAYS
INDEX

Adopted 06/16/99
Revised 02/16/00
Revised 02/17/05

MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III - CONTROL OF AIR CONTAMINANTS

RULE 310.01
FUGITIVE DUST FROM
OPEN AREAS, VACANT LOTS, UNPAVED PARKING LOTS, AND UNPAVED ROADWAYS

SECTION 100 - GENERAL

101 PURPOSE: To limit the emission of particulate matter into the ambient air from open areas, vacant lots, unpaved parking lots, and unpaved roadways which are not regulated by Rule 310 (Fugitive Dust) of these rules and which do not require a permit nor a Dust Control Plan. The effect of this rule shall be to minimize the amount of fine particulate matter (PM_{10}) entrained into the ambient air as a result of the impact of human activities by requiring measures to prevent, reduce, or mitigate particulate matter emissions.

102 APPLICABILITY: The provisions of this rule shall apply to open areas, vacant lots, unpaved parking lots, and unpaved roadways which are not regulated by Rule 310 (Fugitive Dust) of these rules and which do not require a permit nor a Dust Control Plan. In addition, the provisions of this rule shall apply to any open area or vacant lot that is not defined as agricultural land and is not used for agricultural purposes according to Arizona Revised Statutes (ARS) §42-12151 and ARS §42-12152. The provisions of this rule shall not apply to normal farm cultural practices according to ARS §49-457 and ARS §49-504.4.

SECTION 200 - DEFINITIONS: See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule. For the purpose of this rule, the following definitions shall apply:

201 BULK MATERIAL - Any material, including, but not limited to, earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than 2 inches in length or diameter (i.e., aggregate base course (ABC)), dirt, mud, demolition debris, cotton, trash, cinders, pumice, saw dust, feeds, grains, fertilizers, fluff (from shredders), and dry concrete, that are capable of producing fugitive dust.

202 CHEMICAL/ORGANIC STABILIZER - Any non-toxic chemical or organic dust suppressant, other than water, which meets any specifications, criteria, or tests required by any Federal, State, or local water agency and is not prohibited for use by any applicable law, rule, or regulation.

203 CONTROL MEASURE - A technique, practice, or procedure used to prevent or minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust.

204 DISTURBED SURFACE AREA - A portion of the earth's surface (or material placed thereupon) which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition, thereby increasing the potential for the emission of fugitive dust. For the purpose of this rule, an area is considered to be a disturbed surface area until the activity that caused the disturbance has been completed and the disturbed surface area meets the standards described in Section 300 of this rule, as applicable.

205 DUST SUPPRESSANT - Water, hygroscopic material, solution of water and chemical surfactant, foam, non-toxic chemical stabilizer, or any other dust palliative, which is not prohibited for ground surface application by the Environmental Protection Agency (EPA) or the Arizona Department of Environmental Quality (ADEQ), or any applicable law, rule, or regulation, as a treatment material for reducing fugitive dust emissions.

206 FEEDLOTS AND/OR LIVESTOCK AREAS - Any area on which an operation directly related to feeding animals, displaying animals, racing animals, exercising animals, and/or for any other such activity exists.

207 FUGITIVE DUST - The particulate matter not collected by a capture system, that is entrained in the ambient air and is caused from human and/or natural activities, such as, but not limited to, movement of soil, vehicles, equipment, blasting, and wind. For the purpose of this rule, fugitive dust does not include particulate matter emitted directly from the exhaust of motor vehicles and other internal combustion engines, from portable brazing, soldering, or welding equipment, and from piledrivers, and does not include emissions from process and combustion sources that are subject to other rules in Regulation III (Control Of Air Contaminants) of these rules.

208 MOTOR VEHICLE - A self-propelled vehicle for use on the public roads and highways of the State of Arizona and required to be registered under the Arizona State Uniform Motor Vehicle Act, including any non-motorized attachments, such as but not limited to, trailers or other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.

209 NORMAL FARM CULTURAL PRACTICE - All activities by the owner, lessee, agent, independent contractor, and/or supplier conducted on any facility for the production of crops and/or nursery plants. Disturbances of the field surface caused by turning under stalks, tilling, leveling, planting, fertilizing, or harvesting are included in this definition.

210 OFF-ROAD VEHICLE - Any self-propelled conveyance specifically designed for off-road use, including, but not limited to, off-road or all-terrain equipment, trucks, cars, motorcycles, motorbikes, or motorbuggies.

211 OPEN AREAS AND VACANT LOTS - Any of the following described in Section 211.1 through Section 211.4 of this rule. For the purpose of this rule, vacant portions of residential or commercial lots that are immediately adjacent and owned and/or operated by the same individual or entity are considered one vacant open area or vacant lot.

211.1 An unsubdivided or undeveloped tract of land adjoining a developed or a partially developed residential, industrial, institutional, governmental, or commercial area.

211.2 A subdivided residential, industrial, institutional, governmental, or commercial lot that contains no approved or permitted buildings or structures of a temporary or permanent nature.

211.3 A partially developed residential, industrial, institutional, governmental, or commercial lot.

211.4 A tract of land, in the PM_{10} nonattainment area, adjoining agricultural property.

212 OWNER AND/OR OPERATOR - Any person who owns, leases, operates, controls, or supervises a fugitive dust source subject to the requirements of this rule.

213 PAVE - To apply and maintain asphalt, concrete, or other similar material to a roadway surface (i.e., asphaltic concrete, concrete pavement, chip seal, or rubberized asphalt).

214 PM_{10} NONATTAINMENT AREA - An area designated by the EPA as exceeding national ambient air quality standards based upon data collected thru air quality monitoring. The geographical boundary of Maricopa County's PM_{10} nonattainment area is defined as the rectangle determined by and including the following townships and ranges: T6N, R3W; T6N, R7E; T2S, R3W; T2S, R7E; and T1N, R8E. Maricopa County's PM_{10} nonattainment area includes the following cities: Surprise, Peoria, Glendale, Phoenix, Scottsdale, Tempe, Mesa, Gilbert, Chandler, Avondale, Buckeye, and Goodyear.

215 PUBLIC ROADWAYS - Any roadways that are open to public travel.

216 UNPAVED PARKING LOT - Any area larger than 5,000 square feet that is not paved and that is used for parking, maneuvering, or storing motor vehicles.

217 UNPAVED ROADWAY (INCLUDING ALLEYS) - A road that is not paved and that is owned by Federal, State, county, municipal, or other governmental or quasi-governmental agencies. For the purpose of this rule, an unpaved roadway (including alleys) is not a

horse trail, hiking path, bicycle path, or other similar path used exclusively for purposes other than travel by motor vehicles.

218 VACANT LOT - The definition of vacant lot is included in Section 211 (Definition Of Open Areas And Vacant Lots) of this rule.

SECTION 300 - STANDARDS

301 VEHICLE USE IN OPEN AREAS AND VACANT LOTS: If open areas and vacant lots are 0.10 acre or larger and have a cumulative of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, then the owner and/or operator of such open areas and vacant lots shall implement one of the control measures described in Section 301.1 of this rule within 60 calendar days following the initial discovery of vehicle use on open areas and vacant lots. Within 30 calendar days following the initial discovery by the Control Officer of vehicle use on open areas and vacant lots, the owner and/or operator of such open areas and vacant lots shall provide in writing to the Control Officer a description and date of the control measure(s) to be implemented to prevent such vehicle use on open areas and vacant lots. For the purpose of this rule, such control measure(s) shall be considered effectively implemented when the open areas and vacant lots meet one of the stabilization limitations described in Section 301.2 of this rule. Once a control measure in Section 301.1 of this rule has been effectively implemented, then such open area or vacant lot is subject to the requirements of Section 302 (Open Areas And Vacant Lots) of this rule. Use of or parking on open areas and vacant lots by the owner and/or operator of such open areas and vacant lots and/or landscape maintenance of such open areas and vacant lots shall not be considered vehicle use in open areas and vacant lots, although such open areas and vacant lots shall still meet the stabilization limitations described in Section 301.2 of this rule. For the purpose of this rule, landscape maintenance does not include grading, trenching, nor any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

301.1 Control Measures:

a. Prevent motor vehicle and/or off-road vehicle trespassing, parking, and/or access, by installing barriers, curbs, fences, gates, posts, signs (written in English and Spanish and in compliance with ordinance(s) of local jurisdictions), shrubs, trees, or other effective control measures.

b. Uniformly apply and maintain surface gravel or chemical/organic stabilizers to all areas disturbed by motor vehicles and/or off-road vehicles in compliance with one of the stabilization limitations described in Section 301.2 of this rule.

c. Apply and maintain an alternative control measure approved in writing by the Control Officer and the Administrator of the EPA.

301.2 Stabilization Limitations:

a. A visible crust shall be implemented, as determined by Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. A threshold friction velocity (TFV) corrected for non-erodible elements of 100 cm/second or higher shall be implemented, as determined by Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules; or

c. Flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50% shall be implemented, as determined by Appendix C, Section

2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules; or

d. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30% shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

e. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

f. A percent cover that is equal to or greater than 10% for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules; or

g. An alternative test method approved in writing by the Control Officer and the Administrator of the EPA shall be implemented.

302 OPEN AREAS AND VACANT LOTS: If open areas and vacant lots have 0.5 acre or more of disturbed surface area and remain unoccupied, unused, vacant, or undeveloped for more than 15 days, then the owner and/or operator of such open areas and vacant lots shall implement one of the control measures described in Section 302.1 of this rule within 60 calendar days following the initial discovery of the disturbance on the open areas and vacant lots. Within 30 calendar days following the initial discovery by the Control Officer of the disturbance on the open areas and vacant lots, the owner and/or operator of such open areas and vacant lots shall provide in writing to the Control Officer a description and date of the control measure(s) to be implemented. For the purpose of this rule, such control measure(s) shall be considered effectively implemented when the open areas and vacant lots meet one of the stabilization limitations described in Section 302.2 of this rule. Should an open area or vacant lot on which no activity is occurring contain more than one type of disturbance, soil, vegetation, or other characteristics that are visibly distinguishable, then each representative surface shall be tested separately for stability, in an area that represents a random portion of the overall disturbed conditions of the site, according to the appropriate test methods in Appendix C of these rules and included or eliminated from the total size assessment of disturbed surface area(s) depending on test method results.

302.1 Control Measures:

a. Establish vegetative ground cover on all disturbed surface areas within 60 calendar days following the initial discovery of the disturbance. Such control measure(s) must be maintained and reapplied, if necessary, until the disturbed surface areas are stabilized, in compliance with one of the stabilization limitations described in Section 302.2 of this rule. Stabilization shall be achieved, per this control measure, within eight months after the control measure has been implemented.

b. Apply a dust suppressant to all disturbed surface areas, in compliance with one of the stabilization limitations described in Section 302.2 of this rule.

c. Restore all disturbed surface areas within 60 calendar days following the initial discovery of the disturbance, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions. Such control measure(s) must be maintained and reapplied, if necessary, until the disturbed surface areas are stabilized, in

compliance with one of the stabilization limitations described in Section 302.2 of this rule. Stabilization shall be achieved, per such control measure, within eight months after such control measure has been implemented.

d. Uniformly apply and maintain surface gravel, in compliance with one of the stabilization limitations described in Section 302.2 of this rule.

e. Apply and maintain an alternative control measure approved in writing by the Control Officer and the Administrator of the EPA.

302.2 Stabilization Limitations:

a. A visible crust shall be implemented, as determined by Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. A threshold friction velocity (TFV), corrected for non-erodible elements of 100 cm/second or higher, shall be implemented, as determined by Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules; or

c. Flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50% shall be implemented, as determined by Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules; or

d. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30% shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

e. Standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules; or

f. A percent cover that is equal to or greater than 10% for non-erodible elements shall be implemented, as determined by Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules; or

g. An alternative test method approved in writing by the Control Officer and the Administrator of the EPA shall be implemented.

303 UNPAVED PARKING LOTS: The owner and/or operator of an unpaved parking lot shall implement one of the control measures described in Section 303.1 of this rule on any surface area(s) of the lot on which vehicles enter, park, and exit. For unpaved parking lots that are utilized intermittently, for a period of 35 days or less during the calendar year, the owner and/or operator shall implement one of the control measures described in Section 303.1 of this rule, during the period that the unpaved parking lots are utilized for vehicle parking. For the purpose of this rule, such control measure(s) shall be considered effectively implemented when the unpaved parking lot meets the stabilization and opacity limitations described in Section 303.2 of this rule.

303.1 Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization and opacity limitations described in Section 303.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization and opacity limitations described in Section 303.2 of this rule.

303.2 Stabilization And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from unpaved parking lots do not exceed 20% opacity and meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 8%.

304 UNPAVED ROADWAYS (INCLUDING ALLEYS): If a person allows 150 vehicles or more per day to use an unpaved roadway (including alleys) in the PM_{10} nonattainment area, then such person shall first implement one of the control measures described in Section 304.1 of this rule. For the purpose of this rule, such control measure(s) shall be considered effectively implemented when the unpaved roadway (including alleys) meets the stabilization and opacity limitation described in Section 304.2 of this rule.

304.1 Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization and opacity limitations described in Section 304.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization and opacity limitations described in Section 304.2 of this rule.

304.2 Stabilization And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from unpaved roadways (including alleys) do not exceed 20% opacity and meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 6%.

305 FEEDLOTS AND/OR LIVESTOCK AREAS: The owner and/or operator of any feedlot and/or livestock area shall implement one of the control measures described in Section 305.1 of this rule. For the purpose of this rule, such control measure(s) shall be considered effectively implemented when the feedlot and/or livestock area meets the opacity limitation described in Section 305.2 of this rule.

305.1 Control Measures:

a. Apply dust suppressants, in compliance with the opacity limitation described in Section 305.2 of this rule.

b. Uniformly apply and maintain surface gravel, in compliance with the opacity limitation described in Section 305.2 of this rule.

c. Install shrubs and/or trees within 50 feet to 100 feet of animal pens, in compliance with the opacity limitation described in Section 305.2 of this rule.

305.2 Opacity Limitation: For the purpose of this rule, control measures shall be considered effectively implemented when opacity observations for fugitive dust emissions from feedlots and/or livestock areas do not exceed 20% opacity, as determined by Appendix C, Section 3 (Visual Determination Of Opacity Of Emissions From Sources For Time-Average Regulations) of these rules.

306 EROSION-CAUSED DEPOSITION OF BULK MATERIALS ONTO PAVED SURFACES: In the event that erosion-caused deposition of bulk materials or other materials occurs on any adjacent paved roadway or paved parking lot, the owner and/or operator of the property from which the deposition eroded shall implement both of the control measures described in

Section 306.1 of this rule. For the purpose of this rule, such control measures shall be considered effectively implemented when the deposition meets the opacity limitation described in Section 306.2 of this rule. Exceedances of the opacity limitation, due to erosion-caused deposition of bulk materials onto paved surfaces, shall constitute a violation of the opacity limitation.

306.1 Control Measures:

a. Remove any and all such deposits by utilizing the appropriate control measures within 24 hours of the deposits' identification or prior to the resumption of traffic on pavement, where the pavement area has been closed to traffic; and

b. Dispose of deposits in such a manner so as not to cause another source of fugitive dust.

306.2 Opacity Limitation: For the purpose of this rule, control measures shall be considered effectively implemented when opacity observations for fugitive dust emissions from erosion-caused deposition of bulk materials onto paved surfaces do not exceed 20% opacity, as described in Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.

307 EASEMENTS, RIGHTS-OF-WAY, AND ACCESS ROADS FOR UTILITIES (ELECTRICITY, NATURAL GAS, OIL, WATER, AND GAS TRANSMISSION): If an owner and/or operator allows 150 vehicles or more per day to use an easement, right-of-way, and access road for utilities (electricity, natural gas, oil, water, and gas transmission) in the PM_{10} nonattainment area, then such owner and/or operator shall first implement one of the control measures described in Section 307.1 of this rule. For the purpose of this rule, such control measure(s) shall be considered effectively implemented, when the easement, right-of-way, and access road for utilities (electricity, natural gas, oil, water, and gas transmission) meet the stabilization and opacity limitation described in Section 307.2 of this rule.

307.1 Control Measures:

a. Pave.

b. Apply dust suppressants, in compliance with the stabilization and opacity limitations described in Section 307.2 of this rule.

c. Uniformly apply and maintain surface gravel, in compliance with the stabilization and opacity limitations described in Section 307.2 of this rule.

307.2 Stabilization And Opacity Limitations: For the purpose of this rule, control measures shall be considered effectively implemented when stabilization and opacity observations for fugitive dust emissions from easements, rights-of-way, and access roads for utilities (electricity, natural gas, oil, water, and gas transmission) do not exceed 20% opacity and meet one of the following, as determined by Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules:

a. Silt loading is not equal to or greater than 0.33 oz/ft^2; or

b. Silt content does not exceed 6%.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS (NOT APPLICABLE)

SECTION 500 - MONITORING AND RECORDS

501 STABILIZATION OBSERVATIONS:

501.1 Stabilization observations for unpaved parking lots and/or unpaved roadways (including alleys) shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules.

501.2 Stabilization observations for an open area and vacant lot shall be conducted in accordance with the following:

a. Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules; or

b. Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules, where the threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements is 100 cm/second or higher; or

c. Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules, where flat vegetation cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) is equal to at least 50%; or

d. Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules, where standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) is equal to or greater than 30%; or

e. Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules, where the standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) is equal to or greater than 10% and where the threshold friction velocity, corrected for non-erodible elements, is equal to or greater than 43 cm/second; or

f. Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules where a percent cover is equal to or greater than 10% for non-erodible elements.

g. An alternative test method approved in writing by the Control Officer and the Administrator of the EPA.

502 RECORDKEEPING: Any person subject to the requirements of this rule shall compile and retain records that provide evidence of control measure application (i.e., receipts and/or purchase records). Such person shall describe, in the records, the type of treatment or control measure, extent of coverage, and date applied. Upon verbal or written request by the Control Officer, such person shall provide the records and supporting documentation within 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, such person shall provide the records without delay.

503 RECORDS RETENTION: Copies of the records required by Section 502 (Recordkeeping) of this rule shall be retained for at least one year.

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Maricopa County
Air Quality Department

Robert J. Kard, Director
1001 North Central, Ste 500
Phoenix, Arizona 85004
Phone: (602) 506-6701
Fax: (602) 372-6440

September 28, 2005

Stephen A. Owens
Arizona Department Of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

Mr. Owens:

Enclosed is a final State Implementation Plan revision package for amendments to the Maricopa County Air Pollution Control Regulations consistent with A.R.S. §49-479 and 40 CFR 51. The enclosed amendments include supplemental information on the implementation of Rule 310-Fugitive Dust:

Application For Dust Control Permit
And
Guidance For Application For Dust Control Permit

We are submitting this package to the Arizona Department Of Environmental Quality as an official revision to the Arizona State Implementation Plan.

Thank you for your cooperation and consideration in this matter. If you have any questions, please contact Jo Crumbaker, Manager-Planning & Analysis Division, at (602) 506-6705.

Sincerely,

Robert J. Kard, Director

cc: Julie Rose, EPA
Wienke Tax, EPA
Wayne Nastri, EPA
Andrew Steckel, EPA
Colleen McKaughan, EPA
Nancy Wrona, ADEQ

State Implementation Plan Revision Package

Revisions To The
Maricopa County Air Pollution Control Regulations

Application For Dust Control Permit
And
Guidance For Application For Dust Control Permit

Prepared By
Maricopa County Air Quality Department
Planning & Analysis Division
1001 North Central Avenue, Suite 695
Phoenix, Arizona 85004
(602) 506-6705

Completeness Checklist

Completeness Checklist

1. Agency: Maricopa County Air Quality Department

2. Submitted Rule:

Number	Title	Adoption Date
	Application For Dust Control Permit	July 1, 2005
	Guidance For Application For Dust Control Permit	July 1, 2005

3. EPA Analogous Approved Rule (Applicable SIP):

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are not analogous to an EPA approved rule (applicable SIP).

4. State/District Authority For Adoption/Implementation:

A.R.S. §49-479.

5. Pollutants Regulated By Rule:

PM ✓, SO_X___, VOC___, NOx___, CO___, Pb___

6. Identification Of Sources By Name Or Number/Location (City, County, Or District) Area's Attainment And Plan Status (Group By Size/Subcategory, If Necessary):

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust. The provisions of Rule 310 apply to all dust generating operations. Dust generating operations include: any activity capable of generating fugitive dust, including but not limited to, land clearing, earthmoving, weed abatement by discing or blading, excavating, construction, demolition, bulk material handling, storage and/or transporting operations, vehicle use and movement, the operation of any outdoor equipment, or unpaved parking lots. For the purpose of Rule 310, landscape maintenance and playing on or maintaining a field used for non-motorized sports shall not be considered a dust generating operation. However, landscape maintenance shall not include grading, trenching, or any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

PM_{10} Classification:	Serious (As Of June 1996)
Carbon Monoxide Classification:	Attainment (As Of April 8, 2005)
1-Hour Ozone Classification:	Serious (As Of February 1998)[1]
8-Hour Ozone Classification:	Basic (As Of April 15, 2004)

[1]On May 16, 2001, the EPA finalized its finding of attainment for the Phoenix area for the 1-hour national air quality standard for ground-level ozone. The EPA has not yet re-designated the area to attainment with the 1-hour ozone standard. Arizona must first submit an air quality maintenance plan showing how the Phoenix area will maintain the 1-hour ozone standard for 10 years.

7. Summary Of Rule/Rule Changes:

The EPA designated a portion of Maricopa County as a serious PM_{10} nonattainment area. Maricopa County is submitting the Application For Dust Control Permit and the Guidance For Application For Dust Control Permit to address one of three commitments made in the PM_{10} serious area nonattainment area plan for the Arizona State Implementation Plan (SIP).

Rule 310, originally adopted in July 1988, is Maricopa County's rule for controlling fugitive dust emissions. Because Maricopa County is a serious nonattainment area for PM_{10}, the Maricopa County Air Quality Department helped develop a PM_{10} serious area nonattainment plan for the SIP. The EPA approved the plan in April, 2002, contingent on the completion of three commitments by Maricopa County (See 65 Federal Register 19964 (2000) and 67 Federal Register 48717 (2002)). The revisions to Rule 310, Appendix C, and new Appendix F, as adopted April 7, 2004, address the commitments.

One of the three commitments that Maricopa County made was to "research, develop and incorporate additional requirements for dust suppression practices/equipment for construction activities into dust control plans and/or Rule 310" (65 Fed. Reg. 19964, 19980). This commitment addresses the EPA's concerns that Dust Control Plans lack source-specific criteria for varying dust control measures. For example, a source engaged in grading or cut-and-fill dust generating operations for a multi-acre project chooses to comply with Rule 310 by applying water. Neither the rule nor the source's Dust Control Plan establishes minimum criteria for the number and size of water trucks/water applications systems for any given size construction site or a ratio of earthmoving equipment to water trucks. (65 Federal Register 19964, 19980).

Maricopa County added new provisions to Rule 310, itself, and revised Dust Control Plan forms and permit application forms to incorporate Rule 310 revisions, as adopted April 7, 2004, and to clarify the permit instructions and layout. Also, Maricopa County revised Dust Control Permit applications to more clearly request the information that is required in order to evaluate chosen control measures. With this information provided up front, Maricopa County expects to be able to approve or disapprove Dust Control Plans based on whether specified control measures will be effective at each unique site. A dust generating operation will not be able to obtain a Dust Control Permit, until a satisfactory Dust Control Plan is submitted and approved by the Maricopa County Air Quality Department.

8. Rule's Effect On Emissions:

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust.

The air quality modeling previously submitted to the EPA was revised to reflect a lower compliance rate (80%) for Rule 310. According to the revised air quality modeling, the committed measures in the revised serious PM_{10} nonattainment area plan are expected to result in attainment of both the 50 micrograms per cubic meter annual average PM_{10} standard and the 150 micrograms per cubic meter 24-hour PM_{10} standard in 2006. Specifically, the committed measures are expected to result in an annual PM_{10} concentration of 49.68 micrograms per cubic meter and a 24-hour PM_{10} concentration of 149.3 micrograms per cubic meter in 2006.

The single most effective control measure for modeling attainment of the annual average PM_{10} standard is strengthening and better enforcement of Rule 310. Maricopa County committed to hire additional inspectors. New inspectors will expand the geographic coverage and frequency of proactive inspection and will improve Maricopa County's response time to complaints. Also, Maricopa County's Rule 310 outreach and education program will assist in achieving maximum compliance by 2006.

The evaluation of the committed measures - those used for numeric credit and those which will improve air quality but are not used for numeric credit - are summarized below:

- It is assumed that PM_{10} emissions resulting from construction activities are 72% controlled in 2006. Because the base case emissions were assumed to be 18% controlled, raising the control to 72% for 2006 will provide 66% control of the base case emissions for 2006.
- It is assumed that methods used to remove and/or control trackout form construction sites resulted in 72% control in 2006. Because the base case emissions were assumed to be 18% controlled, raising the control to 72% for 2006 will provide 66% control of the base case emissions for 2006.

- Assumptions related to the control of windblown emissions from construction sites were revised to be consistent with the assumptions related to control of construction-activity generated fugitive dust. It was assumed that construction sites on the regional scale used the following control measures equally: wind fences, chemical stabilizers, gravel, and watering. It was assumed that windblown emissions from construction sites were 70% controlled in 2006. Because the base case emissions were assumed to be 20% controlled, raising the control to 70% for 2006 will provide 62.4% control of the base case emissions for 2006.
- The acreage of construction activity that was used to estimate total construction emissions in the modeling inventory was based on the permitted acres of construction. Therefore, only emissions from permitted construction activities appear in the inventory and a rule penetration of 100% is appropriate for Rule 310 with regard to construction activities.

9. Demonstration That NAAQS/PSD Increments/RFP Demonstration Are Protected (As Appropriate):

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust. Rule 310 strengthens the SIP by limiting the amount of PM_{10} emitted from all dust generating operations; thus, demonstrating that NAAQS/PSD increments/RFP demonstrations are protected (as appropriate).

On November 9, 1999, the EPA determined that the serious PM_{10} nonattainment area plan could not be approved, because the plan assumed that Maricopa County's Rule 310 and Rule 310.01 would achieve 90% compliance by 2006. The EPA believed that the compliance rate was unrealistic and that there was no strategy in the plan for reducing dust on private unpaved roads. To address the approvability issues, Maricopa County committed to revising Rule 310 and to strengthening the enforcement of Rule 310. A revised serious PM_{10} nonattainment area plan was submitted to the EPA in February 2000.

The EPA approved the revised serious PM_{10} nonattainment area plan in April 2002, contingent on the completion of three commitments by Maricopa County. Maricopa County is submitting the Application For Dust Control Permit and the Guidance For Application For Dust Control Permit to address one of three commitments made in the PM_{10} serious area nonattainment area plan for the Arizona State Implementation Plan (SIP).

10. Modeling Information Used To Support Rule Revision:

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust and do not contain modeling information. Modeling information was not used to support revisions to Rule 310, as adopted on April 7, 2004, because the revisions to Rule 310 strengthen the SIP.

11. Evidence That Emissions Limitations Are Based On Continuous Emission Reduction Technology, Add-On Controls, Reformulated Materials, And/Or Industrial/Process Equipment Designs:

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust and do not contain emissions limitations.

Emissions limitations and work practices standards are required in Rule 310 and include the most stringent measures from other states. For example, the control measures for trackout are potentially more stringent than South Coast's Rule 403; the control measures for bulk material transport are as stringent as the most stringent measures identified in Imperial County's Regulation VIII; the control measures for material spillage, erosion, and accumulation onto roadways are as stringent at South Coast's Rule 1186.

12. Identification Of Section/Paragraph In Rule That Contains Emission Limitations, Work Practice Standards, Averaging Times, Test Procedures And/Or Recordkeeping/Reporting Requirements:

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust and do not contain emission limitations, work practice standards, averaging times, test procedures, and/or recordkeeping/reporting requirements.

Emission limitations are described in Rule 310, Section 301 (Opacity Limitation For Dust Generating Operations). Stabilization requirements are described in Rule 310, Section 302 (Stabilization Requirements For Dust Generating Operations). Work practice standards are described in Rule 310, Section 306 (Control Measures) and in Section 308 (Work Practices). Test procedures and recordkeeping/reporting requirements are described in Rule 310, Section 501 (Compliance Determination), Rule 310, Section 502 (Recordkeeping), Rule 310, Section 503 (Records Retention), and Rule 310, Section 504 (Test Methods Adopted By Reference).

13. Compliance/Enforcement Strategies To Be Used To Determine Compliance (Including Frequency Of Inspection):

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit, as supplemental information on the implementation of Rule 310-Fugitive Dust, do not deviate from EPA policies.

Maricopa County's implementation of an enhanced fugitive dust program includes public outreach/education, rule development, staffing, inspection frequency, policy development, enforcement plan development, and performance measures. Rule 310 requirements are administered through a visual inspection program and/or a permit program that includes review of permits, inspection of work sites, performance of compliance test methods, and review of records and activities. Maricopa County's enforcement options include: compliance status notification, notice of violation, follow-up inspection/investigation, Department report, referral to County Attorney, review by Enforcement Officer, order of abatement by consent, order of abatement, civil complaint, notice to appear and complaint (criminal complaint), injunctive relief, photographs, videos, compliance inspection reports, correspondence, records, other applicable documentation, and analytical tests.

14. Special Economic/Technological Justifications For Deviations From EPA Policies (As Appropriate):

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit, as supplemental information on the implementation of Rule 310-Fugitive Dust, do not deviate from EPA policies.

15. Other Comments

Attached Support Documentation Includes The Following:

Appendix 1	Maricopa County Agenda Information Form And Resolution To Submit Supplemental Information To Support Implementation Of Rule 310 For The Maricopa County, Arizona Serious PM_{10} Nonattainment Area
Appendix 2	Exhibit A-1 Of The Resolution - Application For Dust Control Permit
Appendix 3	Exhibit A-2 Of The Resolution - Guidance For Application For Dust Control Permit
Appendix 4	Notice Of Public Hearing
Appendix 5	Affidavit Of Publication
Appendix 6	Certified Excerpts From The Minutes Of The Board Of Supervisors' Public Hearing

For EPA Use Only

SIP Rule Revision Is: _____ **Complete** _____ **Incomplete**

	Name	Telephone Number
Department Contact:	Jo Crumbaker	602.506.6705
State Contact:	Ira Domsky Diane Arnst	602.771.2365 602.771.2375
EPA Contact:		

State Submittal Date: _____

EPA SIP Enforceability Statement

1. APPLICABILITY

a. What sources are being regulated?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust. The provisions of Rule 310 apply to all dust generating operations. Dust generating operations include: any activity capable of generating fugitive dust, including but not limited to, land clearing, earthmoving, weed abatement by discing or blading, excavating, construction, demolition, bulk material handling, storage and/or transporting operations, vehicle use and movement, the operation of any outdoor equipment, or unpaved parking lots. For the purpose of Rule 310, landscape maintenance and playing on or maintaining a field used for non-motorized sports shall not be considered a dust generating operation. However, landscape maintenance shall not include grading, trenching, or any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

b. What exemptions are provided?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust. Rule 310 does not apply to normal farm cultural practices under Arizona Revised Statutes (A.R.S.) §49-457 and §49-504.4 and open areas, vacant lots, unpaved parking lots, and unpaved roadways that are not located at sources that require any permit under the Maricopa County Air Pollution Control Regulations.

c. What are the units of compliance?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust. Sources subject to Rule 310 must comply with an opacity limitation of 20% and must meet test methods and stabilization requirements.

d. Is bubbling or averaging of any type allowed?

No.

e. If there is a redesignation, will this change the emission limitations?

No.

2. COMPLIANCE DATES

a. What is the compliance date?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit are supplemental information on the implementation of Rule 310-Fugitive Dust. A source applying for a Dust Control Permit must do so on the Application For Dust Control Permit, as of July 1, 2005.

b. What is the attainment date?

PM_{10} Attainment Date:	December 31, 2006
Carbon Monoxide Attainment Date:	April 8, 2005 (re-classified as attainment)
1-Hour Ozone Attainment Date:	March 21, 2005
8-Hour Ozone Attainment Date:	2009

3. SPECIFICITY OF CONDUCT

a. What test method is required?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit, as supplemental information on the implementation of Rule 310-Fugitive Dust, do not include specific test methods. However, a source must comply with Rule 310 and, in order to determine compliance with Rule 310, a source must follow the following test methods, as applicable:

Opacity Observations:

- Dust Generating Operations: Opacity observations of a source engaging in dust generating operations shall be conducted in accordance with Appendix C, Section 3 (Time Averaged Methods Of Visual Opacity Determination Of Emissions From Dust Generating Operations).
- Unpaved Parking Lot: Opacity observations of any unpaved parking lot shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization For Unpaved Roads And Unpaved Parking Lots) of these rules.
- Unpaved Haul/Access Road: Opacity observations of any unpaved haul/access road (whether at a work site that is under construction or at a work that is temporarily or permanently inactive) shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization For Unpaved Roads And Unpaved Parking Lots) of these rules.

Stabilization Observations:

- Unpaved Parking Lot: Stabilization observations for unpaved parking lots shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rules. When more than 1 test method is permitted for a determination, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation of this rule.
- Unpaved Haul/Access Road: Stabilization observations for unpaved haul/access roads (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots) of these rule. When more than 1 test method is permitted for a determination, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation of this rule.
- Open Area And Vacant Lot Or Disturbed Surface Area: Stabilization observations for an open area or vacant lot or any disturbed surface area on which no activity is occurring (whether at a work site that is under construction, at a work site that is temporarily or permanently inactive) shall be conducted in accordance with at least one of the techniques described below, as applicable. The owner and/or operator of such inactive disturbed surface area shall be considered in violation of this rule if such inactive disturbed surface area is not maintained in a manner that meets at least 1 of the standards described in Section 302.3 (Stabilization Requirements For Dust Generating Operations-Open Area And Vacant Lot Or Disturbed Surface Area) of this rule, as applicable.
  - Appendix C, Section 2.3 (Test Methods For Stablization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules for a visible crust; or
  - Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules for threshold friction velocity (TFV) corrected for non-erodible elements of 100 cm/second or higher; or
  - Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules for flat vegetation cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%; or

- Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%; or
- Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements; or
- Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules for a percent cover that is equal to or greater than 10%, for non-erodible elements; or
- An alternative test method approved in writing by the Control Officer and the Administrator of the EPA.

b. What is the averaging time in the compliance test method?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit, as supplemental information on the implementation of Rule 310-Fugitive Dust, do not include averaging time. However, the averaging time in the compliance test method is described in Appendix C (Fugitive Dust Test Methods). Appendix C describes procedures for test methods associated with Rule 310 (Fugitive Dust).

4. RECORDKEEPING

a. What records are required to determine compliance?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit, as supplemental information on the implementation of Rule 310-Fugitive Dust, do not include records requirements. However, Rule 310 includes the following records requirements:

- Any person who conducts dust generating operations that require a Dust Control Plan shall keep a daily written log recording the actual application or implementation of the control measures delineated in the approved Dust Control Plan (including records on any street sweeping, water applications, and maintenance of trackout control devices, gravel pads, fences, wind barriers, and tarps).
- Any person who conducts dust generating operations that do not require a Dust Control Plan shall compile and retain records (including records on any street sweeping, water applications, and maintenance of trackout control devices, gravel pads, fences, wind barriers, and tarps) that provide evidence of control measure application, by indicating the type of treatment or control measure, extent of coverage, and date applied.

b. In what forms or units must records be kept?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit, as supplemental information on the implementation of Rule 310-Fugitive Dust, do not specify forms or units in which records must be kept. However, Rule 310 includes the following records requirements:

- Any person who conducts dust generating operations that require a Dust Control Plan shall keep a daily written log recording the actual application or implementation of the control measures delineated in the approved Dust Control Plan (including records on any street sweeping, water applications, and maintenance of trackout control devices, gravel pads, fences, wind barriers, and tarps).
- Any person who conducts dust generating operations that do not require a Dust Control Plan shall compile and retain records (including records on any street sweeping, water applications, and maintenance of trackout control devices, gravel pads, fences, wind

barriers, and tarps) that provide evidence of control measure application, by indicating the type of treatment or control measure, extent of coverage, and date applied.

c. On what time basis must records be kept?

The Application For Dust Control Permit and the Guidance For Application For Dust Control Permit, as supplemental information on the implementation of Rule 310-Fugitive Dust, do not specify the time basis on which records must be kept. However, Rule 310 includes the following records requirements:

- Copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation shall be retained for at least six months following the termination of the dust generating operation.
- Copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation shall be retained for at least one year from the date such records were initiated.
- If a person has obtained a Title V Permit and is subject to the requirements of Rule 310, then such person shall retain records required by Rule 310 for at least five years from the date such records are established.

Appendix 1

COPY

Agenda Activity:	Action	Agenda Number:	C-85-05-019-0-00		
Department:	Air Quality				
Category:	Regional Devlopment Servics				
Contact:	Jo Crumbaker	Phone: 506-6705		Continued from:	06/08/2005
Return to:	Pat Sutton	Phone: 506-6443			
Location:	County Administration Building				

Action Requested:
Set a public hearing, as required by 40 CFR 51, for June 8, 2005, to solicit comments on the Resolution to submit supplemental information on the implementation of Maricopa County Air Pollution Control Rule 310 consisting of the Application for Dust Control Permit and Guidance for Application for Dust Control Permit as a revision to Arizona State Implementation Plan (SIP) for PM-10. Following the public hearing, the Board is requested to approve the attached Resolution and submit it as a revision to Arizona State Implementation Plan (SIP) for PM-10.

Complete description of action requested:
The U.S. Environmental Protection Agency (EPA) designated a portion of Maricopa County as a Serious PM-10 Nonattainment Area. Maricopa County is proposing to submit the "Application for Dust Control Permit" and the "Guidance for Application for Dust Control Permit" to address 1 of 3 commitments made in the PM10 serious area nonattainment plan for the Arizona State Implementation Plan (SIP). This supplemental information supports the County's implementation of Rule 310 Fugitive Dust. Also as required by A.R.S. §49-406 G., each agency which commits to implement a control measure contained in the implementation plan shall describe that commitment in a resolution adopted by the governing body of the agency which specifies its authority for implementing the measure, a program for enforcement, and the level of personnel and funding allocated to the implementation of the measure.

PERFORMANCE INFORMATION:
Program: Air Quality
Activity: Air Quality Planning & Permitting
Performance Measure: The number of Air Quality Industrial source permits issued and reviews completed.
Anticipated Results: To hold a hearing to establish requirements for the Rule 310 supplemental information as a revision to SIP for PM-10.

Expenditure Impact by FY(s):
No Impact

Routing: Meeting Date: 06/22/2005	
Legend X=Pending A=Approved R=Rejected	
LEGAL	OMB
A	A

Fran McCarroll
*approved as amended — see attached

Lori Pacini - COBX

From: Jo Crumbaker - ENVX
Sent: Wednesday, June 22, 2005 7:39 AM
To: Lori Pacini - COBX
Cc: Fran McCarroll - COBX
Subject: FW: Additional Text for Guidance
Follow Up Flag: Follow up
Flag Status: Completed

FYI

From: Jo Crumbaker - ENVX
Sent: Tuesday, June 21, 2005 4:42 PM
To: Scott Isham - DIST4X; Eric Latto - DIST1X; James Candland - DIST2X; Jim Bloom - DIST3X; Terri Leija - DIST5X
Subject: Additional Text for Guidance

After discussions with industry, EPA and the County Attorney, the Department has agreed to insert a date, June 2005, on the cover page and to insert a disclaimer after the sentence in the second paragraph of page 2 of the guidance. That paragraph now reads as follows with the new text underlined:

Maricopa County uses this guidance document as criteria when reviewing, evaluating, and approving permits. The rules identified in this guidance document contain legally binding and enforceable requirements. Permits issued by the Department under the rules also contain legally binding and enforceable conditions and terms. This guidance document does not supersede or change any existing federal, state, or county regulations and laws, including requirements of an approved SIP. This guidance document in and of itself does not impose legally binding requirements on the County or the regulated community.

RESOLUTION TO SUBMIT SUPPLEMENTAL INFORMATION TO SUPPORT IMPLEMENTATION OF RULE 310 FOR THE MARICOPA COUNTY, ARIZONA SERIOUS PM-10 NONATTAINMENT AREA

C-85-05-019-0-00

WHEREAS, the Maricopa County nonattainment area is designated as a Serious Area for particulate matter according to the Clean Air Act and has been granted an extension of the attainment date to 2006; and

WHEREAS, the Serious Area Particulate Plan for PM-10 with an approved extension request is required to include Best Available Control Measures and Most Stringent Measures for significant sources and source categories; and

WHEREAS, Maricopa County committed to research, develop and incorporate additional requirements for dust suppression practices/equipment for construction activities into dust control plans and/or Rule 310; and

WHEREAS, the County has revised the dust control application form that includes the dust control plan and developed a guidance that explains the application form and rule requirements; and

WHEREAS, the dust control application form and guidance must be submitted to the administrator for approval into the SIP to satisfy the Board's commitment.

WHEREAS, Arizona Revised Statutes 49-406 G. requires that each agency that commits to implement a control measure describe that commitment in a resolution adopted by the governing body which specifies its authority for implementing the measures as provided in statute, ordinance, or rule; a program for enforcement of the measures; and the level of personnel and funding allocated to the implementation of the measure.

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF SUPERVISORS, MARICOPA COUNTY (BOARD) as follows:

SECTION 1. That the BOARD agrees to proceed with a good faith effort to implement the measure identified in Exhibit A, which is part of this resolution.

SECTION 2. That the BOARD commits to implement the measure as scheduled. Maricopa County also agrees to submit any modification, if necessary, to the technical provisions of the dust control application form and guidance in Exhibit A to EPA for approval as a SIP revision.

PASSED AND ADOPTED by the Board of Supervisors of Maricopa County, Arizona, this 22nd day of June 2005.

Mary W Wilcox
Chairman

ATTEST:
Clerk of the Board

Appendix 2

APPLICATION
FOR
DUST CONTROL PERMIT

Formerly Part Of "Application For An Earthmoving Permit"

There are three sections in this application:

Section 1 - Applicant Information
Section 2 - Project Information
Section 3 - Dust Control Plan

In order for the application to be complete, answer all of the questions in all three sections. Submit the completed application and the appropriate fee to the Maricopa County Air Quality Department.

To complete this application, please use the Guidance For Application For Dust Control Permit, which contains details and explanations of the information required in this application. The guidance includes details and explanations of the information required in this application. Also, please note that if you are completing this application and you are the "applicant", then you are the responsible authority for controlling all aspects of all the work accomplished on-site from initial groundbreaking to final stabilization.

Also, as an "applicant", you are responsible for closing-out the Dust Control Permit when the project is complete and/or when you no longer have control over the day-to-day operations on the site. Refer to Maricopa County Air Pollution Control Regulations Rule 200 (Permit Requirements) and Rule 310 (Fugitive Dust) for more information regarding the requirements and work practices associated with this application. Both of these rules are available at 1001 North Central Avenue or at: http://www.maricopa.gov/aq

For Office Use Only		
District #		
Area #		
NOV #		
Permit #		
Fee Paid/Acreage		
Date Issued		
Approved By		
NESHAP		
Cross Streets		

Date Stamp Here

Section 1 – Applicant Information

1. Applicant: Check all that apply:

☐ Property Owner ☐ General / Prime Contractor

☐ Developer

☐ Lessee

Name: _____

Applicant Address: _____

City/State/Zip: _____

Phone: _____ Fax: _____

E-Mail Address: _____

Local Mailing Address (if not the same as above): _____

Contractor License Number: _____

1a. Is Applicant A Wholly Owned Subsidiary Of Another Company? ☐ Yes ☐ No

If you answered "yes" above, please provide the following information:

1b. Parent Company Name: _____

Address: _____

City/State/Zip: _____

Phone: _____ Fax: _____

State Of Incorporation: _____

2. Property Owner / Developer, If Not Applicant:_____

Address:_____

City/State/Zip:_____

Phone:_____ Fax:_____

Contact Person:_____

3. Primary Project Contact:_____

Title:_____ Company Name:_____

On-Site Phone:_____ Mobile:_____ Fax:_____

E-Mail Address:_____

4. Signature Of A Responsible Official Of The Applicant:

I hereby certify that, based on information and belief formed after reasonable inquiry, the statements and information in the Application For Dust Control Permit, including Section 1-Applicant Information, Section 2-Project Information, and Section 3-Dust Control Plan, are true, accurate, and complete.

A Responsible Official Of The Applicant is the person who will be contacted or named in any enforcement action initiated by the Maricopa County Air Quality Department or the Office Of The Maricopa County Attorney.

Arizona Revised Statute §13-2704 makes it a criminal offense to knowingly make a false material statement to a public servant in connection with an application for any benefit, privilege, or license.

Signature: _____

Printed Name: _____ Title: _____

4a. Company President / Owner:_____

Address: _____

City/State/Zip:_____

Phone:_____ Fax:_____

5. Application Completed By, If Not Signatory:

Printed Name:_____ Title:_____

Phone:_____Fax:_____

Section 2 – Project Information (See Guidance Pages 7 - 12)

E-mail: _____

6. Address Of Project Location: (If no address available include block #, assessor's parcel #, GPS coordinates, etc.)

Address: _____

City/Zip: _____

Major Cross Street North/South: _____

Major Cross Street East/West: _____

Assessor's Parcel Number(s) (if no address available): _____

GPS Coordinates (if no address available): _____

Township: _____ Range: _____ Section: _____

☐ Unincorporated Area ☐ Incorporated Area

7. Name Of Project: _____

8. Description Of Project: _____

_____

9. Will A Basement Or Underground Parking Be Excavated? ☐Yes ☐No

9a. Will Building Occur On A Pre-Existing Pad / Prepared Pad? ☐Yes ☐No

10. Size Of Project Or Physical Area (Acres) That Will Be Disturbed During The Duration Of This Permit, Including Staging And Stockpile Areas, And Temporary Storage Yards: _____

Estimated acres to be graded, if different from size of project indicated above: _____

Estimated cubic yards to be moved within the boundaries of the project: _____

Estimated amount of import material: _____ Estimated amount of export material: _____

11. Project Start Date: _____

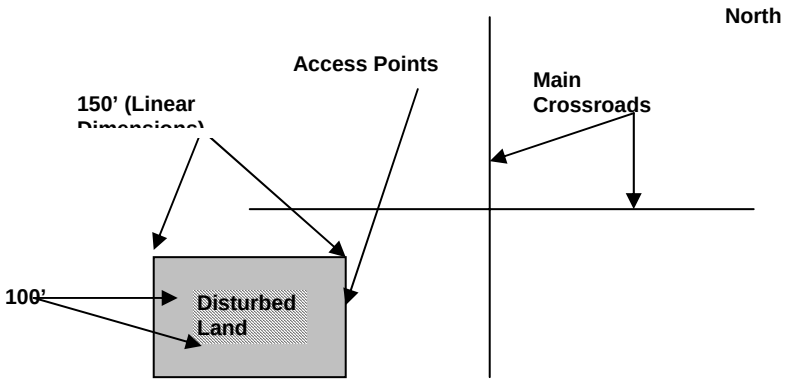
11a. Estimated Duration Of Project: _____

11b. Estimated Duration Of Each Of The Following Project Phases:

Work To Be Performed	Total Acres Disturbed	Number Of Days Disturbed	Acres Disturbed Per Day
Site Clearing/Mass Grading			
Underground Utilities			

12. Attach Project Site Drawing (A Dust Control/Demolition Permit-1 Acre Or Larger will not be issued, unless a drawing is submitted. **Attach a separate page (8½" x 11")** with a drawing showing all of the following elements:

- Entire project site boundaries
- Acres to be disturbed with **linear dimensions** (including staging areas, stockpiles, and storage)
- Nearest public cross-roads
- North arrow
- Planned exit locations onto paved areas accessible to the public



13. Indicate Soil Designations From Appendix F In Maricopa County Air Pollution Control Regulations Or Attach A Copy of The Site Geotechnical Report

For construction projects one acre or larger, except for routine maintenance and repair done under a block permit, designate in the table below which soil texture is naturally present on the work site and which soil texture will be imported onto the work site (if applicable). If the soil on the work site has been tested, then you should rely on the test results to complete the table and you should attach a copy of the site soil report (boring logs) to this application. If the soil on the work site has not been tested, then use Appendix F in the Maricopa County Air Pollution Control Regulations to complete the table below.

Soil Texture Naturally Present On Work Site	Soil Texture To Be Imported Onto Work Site

14. Is This A Re-Application? ☐Yes Previous Permit #_____ ☐No

A permit is valid for 1 year after date of issuance/approval. **The re-application process takes a minimum of 14 days for approval and must be approved prior to expiration of old permit. You must re-apply for a permit more than 14 days before original permit expires.**

15. Asbestos NESHAP Notification Requirements

All facilities scheduled for demolition or renovation (see definitions below) must be inspected by a currently certified Asbestos Hazard Emergency Response Act (AHERA) Asbestos Building Inspector. There is no waiver of this requirement based on the age of the facility. The inspection must be performed within 12 months of commencement of demolition or renovation activity. Questions concerning the Asbestos NESHAP regulation should be referred to Maricopa County's Asbestos NESHAP Coordinator at 602-506-6708 or 602-506-0421. Forms may be obtained at http://www.maricopa.gov/aq/Asbestos/a-forms.asp.

Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of a facility.

Renovation: Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component.

Does The Project Include Demolition Or Renovation? ☐Yes ☐No

Description Of Demolition/Renovation Activities:_____

Date Of Asbestos Inspection:_____

County Plat Number Of Property (_____),(_____),(_____),(_____).

Book *Map* *Parcel* *Split*

Is This A Residential Property? ☐Yes ☐No

If Yes, Is There More Than One Structure On The Property? ☐Yes ☐No

Please Describe Each Structure:_____

If Residential Property, Has The Property <u>Ever</u> Been Used For A Commercial/Industrial Purpose?

☐Yes ☐No

If Yes, Has An Asbestos Inspection Been Conducted By An AHERA Certified Building Inspector Within The Last 12 Months? ☐Yes ☐No

Section 3 – Dust Control Plan (See Guidance Page 13)

When completing the following Dust Control Plan, use the Guidance For Application Fr Dust Control Permit - Section 3 - Instructions to help you select dust control measures and keep in mind the following:

- Categories and/or sub-categories of dust generating operations C3, C5, D1, F, and G, in the following Dust Control Plan, have primary control measures, “P”, required by Rule 310. You will need to choose a contingency measure, "C", for these dust generating operations.
- Where ■ has replaced a "P", the dust control measure cannot be used as a primary control measure.
- Where ■ has replaced a "C", the dust control measure cannot be used as a contingency control measure and is required to be used as a primary control measure.
- Where "Other" is listed without reference to opacity or surface stabilization standard(s) and is selected as a primary control measure, then the description must meet the criteria in the Guidance For Application For Dust Control Permit - Section 3 - Unlisted Dust Control Measures (See Guidance Page 12).

After your Application For Dust Control Permit has been approved, you must post your Dust Control Permit and Dust Control Plan on-site.

A. Vehicles/Motorized Equipment
(See Guidance Page 17)

1. Use In Open Areas

P **C** Restrict trespass by installing signs

P **C** Install physical barriers to prevent access: curbs, fences, gates, posts, signs, shrubs or trees

(Circle selected measure(s))

P **C** Other (so that the standards in Rule 310, Section 302.3 are met) _____

Or, explain why this control measure is not applicable_____

2. Unpaved Parking Lots

P **C** Apply water, so that the standards in Rule 310, Section 302.1 are met (Fill Out Section I)

P **C** Apply water in combination with dust suppressant(s), so that that one of the standards in Rule 310, Section 302.1 is met (Fill Out Section J)

P **C** Apply and maintain gravel, recycled asphalt, or other suitable material, so that the standards in Rule 310, Section 302.1 are met

P **C** Pave (Choose one of the following): Beginning Of Project* During Project* End Of Project*
*Must stabilize surface prior to paving, so that the standards in Rule 310, Section 302.1 are met

P **C** Apply and maintain dust suppressant(s), other than water, so that the standards in Rule 310, Section 302.1 are met (Fill Out Section J)

■ **C** Limit vehicle speed to 15 m.p.h. on the site_____

P **C** Other (so that the standards in Rule 310, Section 302.1 are met)_____

Or, explain why this control measure is not applicable_____

3. Unpaved Haul Roads/Access Areas

P **C** Limit vehicle trips to no more than 20 per day per road AND limit vehicle speeds to no more than 15 m.p.h. In the space provided, list the maximum number of vehicle trips on the unpaved haul roads/access areas each day (including number of employee vehicles, earthmoving equipment, haul trucks, and water trucks)_____

P **C** Apply water, so that the standards in Rule 310, Section 302.2(a) are met (Fill Out Section I)

P **C** Apply water in combination with dust suppressant(s), so that the standards in Rule 310, Section 302.2(a) are met (Fill Out Section J)

P **C** Pave (Choose one of the following): Beginning Of Project* During Project* End Of Project*
*Must stabilize surface prior to paving, so that the standards in Rule 310, Section 302.2(a) are met

P **C** Apply and maintain surface gravel, recycled asphalt, or other suitable material, so that the standards in Rule 310, Section 302.2(a) are met

P **C** Apply and maintain dust suppressant(s), other than water, so that the standards in Rule 310,

Section 302.2(a) are met (Fill Out Section J)

■ **C** Cease operations

P **C** Other (so that the standards in Rule 310, Section 302.2(a) are met)_____

Or, explain why this control measure is not applicable_____

B. Disturbed Surface Areas

(See Guidance Pages 17 - 18)

1. Before Dust Generating Operations Occur

P **C** Pre-water site to the depth of cuts, so that the standards in Rule 310, Section 301 are met (Fill Out Section I)

P **C** Phase work to reduce the amount of disturbed surface area at any one time
Attach a map delineating the phases and their extent

P **C** Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable_____

2. During Dust Generating Operations

P **C** Apply water, so that the standards in Rule 310, Section 301 are met (Fill Out Section I)

P **C** Apply and maintain dust suppressant(s) other than water, so that the standards in Rule 310,

Section 301 are met (Fill Out Section J)

P **C** Apply water in combination with dust suppressant(s), so that the standards in Rule 310, Section 301 are met (Fill Out Section J)

P **C** Construct wind barrier fences (in conjunction with one of the above listed measures)

■ **C** Cease operations

■ **C** Limit vehicle speed to 15 m.p.h. on the work site_____

P **C** Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable_____

3. Temporary Stabilization Including Weekends, After Work Hours, Holidays, And Periods Up-To 8 Months

P **C** Apply water or other dust suppressant, so that the standards in Rule 310, Section 302.3 are met

(Fill Out Section I or J)

P **C** Apply and maintain gravel, recycled asphalt, or other suitable material, so that the standards in Rule 310, Section 302.3 are met

P **C** Establish vegetative ground cover (landscaping), so that the standards in Rule 310, Section 302.3 are met

P **C** Pave (Choose one of the following): Beginning Of Project* During Project* End Of Project*
*Must stabilize surface prior to paving, so that one of the above stabilization standards is met

■ **C** Restrict vehicular access to area in addition to (1) applying water or other dust suppressant(s) to establish and maintain a visible crust or (2) establishing vegetative ground cover (landscaping), so that the standards in Rule 310, Section 302.3 are met

P **C** Other (so that the standards in Rule 310, Section 302.3 are met)_____

Or, explain why this control measure is not applicable _____

4. Permanent Stabilization Of Open Areas And Vacant Lots Required Within 8 Months Of Ceasing Dust Generating Operations

P **C** Apply water, so that the standards in Rule 310, Section 302.3 are met (Fill Out Section I)

P **C** Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions (desert xeriscaping)

P **C** Establish vegetative ground cover (landscaping), so that the standards in Rule 310, Section 302.3 are met

P **C** Pave (Choose one of the following): Beginning Of Project* During Project* End Of Project*
*Must stabilize surface prior to paving, so that one of the above stabilization standards is met

P **C** Construct building, house, structure, and / or floor

P **C** Apply and maintain dust suppressant(s) other than water (so that the standards in Rule 310, Section 302.3 are met) (Fill Out Section J)

P **C** Other (so that the standards in Rule 310, Section 302.3 are met)_____

Or, explain why this control measure is not applicable_____

_____

C. Bulk Material Handling

(See Guidance Pages 18 - 19)

1. Prior To And/Or During Stacking, Loading, And Unloading Operations

P **C** Apply water, so that the standards in Rule 310, Section 302.3 are met (Fill Out Section I)

P **C** Apply water in combination with dust suppressant(s) at a frequency and intensity, so that the standards in Rule 310, Section 301 are met (Fill Out Section J)

■ **C** Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate, so that the standards in Rule 310, Section 301 are met (Fill Out Section I)

■ **C** Remove material from the downwind side of the storage pile when safe to do so

■ **C** Empty loader bucket slowly and keep loader bucket close to the truck to minimize the drop height while dumping

■ **C** Cease operations

■ **C** Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable_____

2. Open Storage Piles

P **C** Apply water, so that the standards in Rule 310, Section 302.3 are met (Fill Out Section I)

P **C** Apply water in combination with dust suppressant(s), so that the standards in Rule 310, Section 302.3 are met (Fill Out Section J)

P **C** Cover open storage piles with tarps, plastic, or other material

P **C** Apply water to maintain soil moisture content at a minimum of 12% (Fill Out Section I)

P **C** Apply water to maintain at least 70% of the optimum soil moisture content, for areas that have an optimum moisture content for compaction of less than 12% (Fill Out Section I)

P **C** Maintain vegetative cover, so that the standards in Rule 310, Section 302.3 are met

P **C** Construct wind barrier fences (in conjunction with one of the above listed measures)

P **C** Other (so that the standards in Rule 310, Section 308.6 are met) _____

Or, explain why this control measure is not applicable_____

3. On-Site Hauling Within The Boundaries Of The Work Site And Crossing A Paved Area Accessible To The Public

P ■ Required: Load all haul trucks such that the freeboard is not less than 3 inches AND prevent spillage or loss of bulk material from holes or other openings in the cargo compartment AND install suitable trackout control device

■ **C** Limit vehicle speed to 15 m.p.h. on the work site

■ **C** Cease operations

■ **C** Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable_____

4. On-Site Hauling Within The Boundaries Of The Work Site

P **C** Limit vehicle speed to 15 m.p.h. or less while traveling on the work site such that visible emissions coming-off the load do not exceed 20% opacity

P **C** Apply water to the top of the load, so that the standards in Rule 310, Section 301 are met (Fill Out Section I)

P **C** Apply dust suppressant(s) other than water to the top of the load, so that the standards in Rule 310, Section 301 are met (Fill Out Section J)

P **C** Cover haul trucks with a tarp or other suitable closure

■ **C** Cease operations

P **C** Other (so that the standards in Rule 310, Section 301 are met) _____

Or, explain why this control measure is not applicable _____

5. Off-Site Hauling Onto Paved Areas Accessible To The Public

P ■ Required: Cover haul trucks with a tarp or other suitable closure AND load all haul trucks such that the freeboard is not less than 3 inches AND prevent spillage or loss of bulk material from holes or other openings in the cargo compartment AND clean the interior of the cargo compartment of empty haul trucks before leaving the site

■ **C** Apply water to the top of the load, so that the standards in Rule 310, Section 301 are met (Fill Out Section I)

■ **C** Apply dust suppressant(s) other than water to the top of the load, so that the standards in Rule 310, Section 301 are met (Fill Out Section J)

■ **C** Cease operations

■ C Other (so that the standards in Rule 310, Section 301 are met) _____

Or, explain why this control measure is not applicable _____

D. Trackout, Carryout, Spillage, And Erosion

(See Guidance Pages 19 - 20)

1. Trackout Control Device

A trackout control device must be installed if a work site has 2 acres or more of disturbed surface area or if a work site has 100 cubic yards of bulk material hauled on-site or off-site per day.

P ■ Required: Install at all exits to a paved area accessible to the public at least one of the following:

(Circle all that apply)

gravel pad grizzly wheel wash system paved area

■ C Cease operations

P C Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable _____

2. Cleaning

Trackout/carryout must be cleaned up immediately if trackout/carryout extends more than 50 feet along a paved area accessible to the public.

Trackout/carryout must be cleaned up no later than the end of the work day if trackout/carryout extends less than 50 feet along a paved area accessible to the public.

P C Operate a street sweeper or wet broom with sufficient water (e.g. kick broom, steel bristle broom, teflon broom, vacuum) on the following schedule: _____

P C Manually sweep-up deposits on the following schedule: _____

P C Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable_____

E. Weed Abatement By Discing Or Blading

(See Guidance Page 21)

1. Disturbance Operations

P ■ Required: Pre-water site AND apply water before and during weed abatement by discing or blading, so that one of the standards in Rule 310, Section 301 are met (Fill Out Section I)

P ■ Required: Apply water in combination with dust suppressant(s) before and during weed abatement by discing or blading, so that the standards in Rule 310, Section 301 are met (Fill Out Section J)

■ **C** Limit vehicle speed to 15 m.p.h. during discing and blading operations

■ **C** Cease operations

■ **C** Other (so that the standards in Rule 310, Section 301 are met) _____

_____

Or, explain why this control measure is not applicable _____

_____

2. Stabilization

P **C** Pave immediately following weed abatement

P **C** Apply gravel to establish and maintain a threshold friction velocity for disturbed surface areas corrected for non-erodible elements of 100 cm/second or higher

P **C** Apply gravel to establish and maintain a percent cover that is equal to or greater than 10% for non-erodible elements

P **C** Apply water or other dust suppressant(s) to establish and maintain a visible crust (Fill Out Section I Or J)

P **C** Establish vegetative ground cover (landscaping), so that the standards in Rule 310, Section 302.3 are met

P **C** Other (so that the standards in Rule 310, Section 308.8 are met) _____

_____

Or, explain why this control measure is not applicable _____

_____

F. Blasting Operations

(See Guidance Page 21)

P ■ Required: Discontinue blasting, if wind gusts above 25 m.p.h.

P ■ Required: Pre-water AND maintain surface soils in a stabilized condition where support equipment and vehicles will operate, so that the standards in Rule 310, Section 302.1 or Section 302.2 are met (Fill Out Section I)

P **C** Apply water or water in combination with dust suppressants, so that the standards in Rule 310, Section 302.1 or Section 302.2 are met (Fill Out Section I Or J)

P **C** Apply water in combination with dust suppressant(s), so that the standards in Rule 310, Section 302.1 and Section 302.2 are met (Fill Out Section J)

■ **C** Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable._____

G. Demolition Activities

(See Guidance Page 21)

P ■ Required: Apply water or water in combination with dust suppressant(s) to demolition debris immediately following demolition activity, so that the standards in Rule 310, Section 301 are met
(Fill Out Section I Or J)

P ■ Required: Apply water or water in combination with dust suppressant(s) to all surrounding areas and to all disturbed soil surfaces immediately following demolition activity, so that the standards in Rule 310, Section 301 are met (Fill Out Section I Or J)

■ **C** Thoroughly clean debris from paved and other surfaces following demolition activity

■ **C** Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable._____

H. Wind Event

(See Guidance Page 21)

1. When Dust

Generating Operation Is Occurring

P C Cease dust generating operation for the duration of the wind event when the 60-minute average wind speed is greater than 25 m.p.h. and stabilize work area, if dust generating operation is ceased for the remainder of the work day

P C Apply water or other suitable dust suppressant at least twice per hour (once per hour if outside the nonattainment area), so that the standards in Rule 310, Section 301 are met
(Fill Out Section I Or J)

P C Apply water to maintain soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98 or other equivalent method as approved by the Control Officer and the Administrator Of The Environmental Protection Agency (Fill Out Section I)

P C Maintain at least 70% of the optimum soil moisture content for areas that have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D2216-98, or other equivalent method as approved by the Control Officer or the Administrator Of The Environmental Protection Agency (Fill Out Section I)

P C Apply water or other suitable dust suppressant(s) at least twice (once if outside the nonattainment area) per hour and construct fences or three-foot to five-foot high wind barriers with 50% or less porosity adjacent to roadways or urban areas to reduce the amount of windblown material leaving the site (Fill Out Section I Or J)

■ **C** Other (so that the standards in Rule 310, Section 301 are met)_____

Or, explain why this control measure is not applicable_____

2. Temporary Disturbed Surface Areas After Work Hours, Weekends, And Holidays

P C Apply and maintain surface gravel or dust suppressant(s),so that one of the stabilization standards in Rule 310, Section 302.3 is met (Fill Out Section I Or J)

P C Apply water or water in combination with dust suppressant(s) to all disturbed surface areas three times per day, so that one of the stabilization standards in Rule 310, Section 302.3 is met. If there is evidence of windblown dust, increase watering frequency to a minimum of four times per day.
(Fill Out Section I Or J)

P C Apply water or water in combination with dust suppressant(s) on open storage piles at least twice per hour (once per hour if outside the nonattainment area) to maintain a visible crust
(Fill Out Section I Or J)

P C Cover open storage piles with tarps, plastic, or other material such that wind will not remove the coverings

C Other (so that one of the stabilization standards in Rule 310, Section 302.3 is met)_____

Or, explain why this control measure is not applicable_____

I. Water

(See Guidance Pages 21 - 25)

For each of the different project phases, indicate how the water is to be stored on or supplied to the project site and how the water will be applied to control dust generation throughout the project lifetime. "Water supply" means how water will supplied to the site (e.g. (2) 3,000 gal. water towers). "Water application system" means how water will be applied to the site. (e.g. 1 fire hose, (3) 1,000 gal. water trucks). Minimum water availability means water supply in conjunction with the water application system.

Site Clearing / Removal Of Vegetation / Debris / Demolition

Supply	Size/Number	Application	Size/Number
☐ Metered Hydrant	_____	☐ Hose	_____
☐ Water Tower	_____	☐ Water Truck	_____
☐ Water Pond	_____	☐ Water Pull	_____
☐ Other_____	_____	☐ Water Buffalo	_____
		☐ Other_____	_____

Mass Grading

Supply	Size/Number	Application	Size/Number
☐ Metered Hydrant	_____	☐ Hose	_____
☐ Water Tower	_____	☐ Water Truck	_____
☐ Water Pond	_____	☐ Water Pull	_____
☐ Other_____	_____	☐ Water Buffalo	_____
		☐ Other_____	_____

Underground Utilities

Supply	Size/Number	Application	Size/Number
☐Metered Hydrant	_____	☐Hose	_____
☐Water Tower	_____	☐Water Truck	_____
☐Water Pond	_____	☐Water Pull	_____
☐Other_____	_____	☐Water Buffalo	_____
		☐Other_____	_____

Unpaved Haul Roads / Access

Supply	Size/Number	Application	Size/Number
☐Metered Hydrant	_____	☐Hose	_____
☐Water Tower	_____	☐Water Truck	_____
☐Water Pond	_____	☐Water Pull	_____
☐Other_____	_____	☐Water Buffalo	_____
		☐Other_____	_____

Vertical / Paved

Supply	Size/Number	Application	Size/Number
☐Metered Hydrant	_____	☐Hose	_____
☐Water Tower	_____	☐Water Truck	_____
☐Water Pond	_____	☐Water Pull	_____
☐Other_____	_____	☐Water Buffalo	_____
		☐Other_____	_____

Staging / Parking Areas

Supply	Size/Number	Application	Size/Number
☐Metered Hydrant	_____	☐Hose	_____
☐Water Tower	_____	☐Water Truck	_____
☐Water Pond	_____	☐Water Pull	_____
☐Other_____	_____	☐Water Buffalo	_____
		☐Other_____	_____

Structure Excavation

Supply	Size/Number	Application	Size/Number
☐Metered Hydrant	_____	☐Hose	_____
☐Water Tower	_____	☐Water Truck	_____
☐Water Pond	_____	☐Water Pull	_____

☐Other_____	_____	☐Water Buffalo	_____
		☐Other_____	_____

Fine Grading

Supply	Size/Number Size/Number	Application	
☐Metered Hydrant	_____	☐Hose	_____
☐Water Tower	_____	☐Water Truck	_____
☐Water Pond	_____	☐Water Pull	_____
☐Other_____	_____	☐Water Buffalo	_____
		☐Other_____	_____

J. Dust Suppressants

(See Guidance Pages 25 - 35)

Although water is a dust suppressant, the information required by Table J should not include information on water supply and water application. The information required by Table J is for all other dust suppressants that you use. Fill out the applicable areas in the table below and attach information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application. Also, attach product specification(s) and application sheet(s) or label instructions.

Application Section	Manufacturer Name	Product	Application Frequency *	Intensity**
A Vehicles/Motorized Equipment				
B Disturbed Surface Areas				
C Bulk Material Handling				
D Trackout, Carryout, Spillage, And Erosion				
E Weed Abatement By Discing Or Blading				
F Blasting Operations				
G Demolition Activities				
H Wind Event				

* How often the surface will receive a complete application of dust suppressant (e.g. 3 times a day)

** The amount used over a period of time (e.g. gallons/minute)

Appendix 3

GUIDANCE

FOR

APPLICATION

FOR

DUST CONTROL PERMIT

Maricopa County Air Quality Department
1001 North Central Avenue
Phoenix, Arizona 85004
602-506-6700
www.maricopa.gov/aq

Adopted June 2005

This guidance constitutes a body of experience and informed judgment by the Maricopa County Air Quality Department and dust control field inspectors to which you may properly resort for guidance. This guidance includes details and explanations of the information required in the Application For Dust Control Permit. Call 602-506-6700 for help understanding this guidance or for assistance filling out the Application For Dust Control Permit.

The Maricopa County Air Quality Department uses this guidance as criteria when reviewing, evaluating, and approving the Application For Dust Control Permit. The rules identified in this guidance document contain legally binding and enforceable requirements. Permits issued by the Maricopa County Air Quality Department under the rules also contain legally binding and enforceable conditions and terms. This guidance document does not supercede or change any existing federal, state, or county regulations and laws, including requirements of an approved State Implementation Plan (SIP). This guidance document in and of itself does not impose legally binding requirements on Maricopa County or the regulated community.

This guidance includes the following information:

APPLICABLE RULES

Maricopa County Air Pollution Control Regulations **Rule 200** (Permit Requirements), Section 305 (Earthmoving Permit) requires any earthmoving operation disturbing more than 0.1 acres (4,356 sq.ft.) to obtain a permit. The permit is required from initial ground breaking through final stabilization and is valid for one year from the date of issuance. An application must be resubmitted at least 14 calendar days prior to the expiration date of the original permit, if more than 0.1 acres (4,356 sq.ft.) remain disturbed at the expiration of the original permit. Processing and approval may take up to 14 days. The applicant/permit holder must cancel/close-out the permit, when the project is complete or when the applicant/permit holder no longer has control over the day-to-day operations on the site. See Page #14 for more information regarding Dust Control Permit cancellation/close-out.

Also, Maricopa County Air Pollution Control Regulations **Rule 200** (Permit Requirements), Section 308 (Standards For Applications) gives the Control Officer authority to design permit applications that contain all the information necessary to enable the Control Officer to make the determination to grant or deny a permit. Such applications can contain terms and conditions as the Control Officer deems necessary to assure a source's compliance with the requirements of the Maricopa County Air Pollution Control Regulations - in this case the owner's and/or operator's compliance with Rule 310 (Fugitive Dust).

Maricopa County Air Pollution Control Regulations **Rule 310** (Fugitive Dust), Section 303 (Dust Control Plan Required) requires an owner and/or operator of a dust generating operation to submit a Dust Control Plan with any Dust Control Permit and before commencing any routine dust generating operation at a site that has obtained or must obtain a Title V, Non-Title V, or general permit under Maricopa County Air Pollution Control Regulations, Regulation II (Permits And Fees). The Dust Control Plan must describe all control measures to be implemented before, after, and while conducting any dust generating operation, including during weekends, after work hours, and on holidays. Maricopa County approves, disapproves, or conditionally approves a Dust Control Plan, in accordance with the criteria used to approve, disapprove, or conditionally approve a permit.

Once approved by the Control Officer, the Dust Control Permit and the Dust Control Plan must be posted on-site. Failure to comply with the provisions of the approved Dust Control Plan and/or failure to comply with all other requirements of Rule 310 is deemed to be a violation of Rule 310.

APPLICABLE PRINCIPLES

Below are three terms and their definitions. These are the principles, upon which the Application For Dust Control Permit are based.

Fugitive Dust – The particulate matter not collected by a capture system that is entrained in the ambient air and is caused from human and/or natural activities, such as, but not limited to, movement of soil, vehicles, equipment, blasting, and wind. For the purpose of Rule 310, fugitive dust does not include particulate matter emitted directly from the exhaust of motor vehicles and other internal combustion engines, from portable brazing, soldering, or welding equipment, and from piledrivers, and does not include emissions from process and combustion sources that are subject to other rules in Regulation III (Control Of Air Contaminants) of the Maricopa County Air Pollution Control Regulations.

Disturbed Surface Area - A portion of the earth's surface (or material placed thereupon) which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition, thereby increasing the potential for the emission of fugitive dust. For the purpose of Rule 310, an area is considered to be a disturbed surface area until the activity that caused the disturbance has been completed and the disturbed surface area meets the standards described in the Maricopa County Air Pollution Control Regulations Rule 310, Sections 301 and 302.

Dust Generating Operation - Any activity capable of generating fugitive dust, including but not limited to, land clearing, earthmoving, weed abatement by discing or blading, excavating, construction, demolition, bulk material handling, storage and/or transporting operations, vehicle use and movement, the operation of any outdoor equipment, or unpaved parking lots. For the purpose of Rule 310, landscape maintenance and playing on or maintaining a field used for non-motorized sports shall not be considered a dust generating operation. However, landscape maintenance shall not include grading, trenching, or any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

SECTION 1 – APPLICANT INFORMATION

1. Applicant

The applicant's name will show on the permit and will not change from permit to permit. The applicant may also be the responsible party contracting to do the work. The address provided will be put on all subsequent permits with the same applicant name and will serve as the mailing address for the permit or other compliance issues.

Submit the **appropriate fee** for your Application For Dust Control Permit, according to the following:

- If total surface area disturbed is 0.1 acre to less than 1 acre, submit $150.00.
- If total surface area disturbed is 1 acre or more, submit $36/acre plus $150.00 per site.
- A late fee of $100.00 is required for any application submitted in response to a violation.

Make checks payable to "Maricopa County Air Quality Department" or "MCAQD".

2. Property Owner / Developer

Include information regarding the property owner/developer, if different from the applicant.

3. Primary Project Contact

Include information regarding the person knowledgeable of the project site. The phone number provided should be able to reach the contact within 4 hours.

4. Responsible Official

- For a corporation, a corporate officer or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person, if the representative is responsible for the dust generating operations in the subject application. Delegation of authority to such representative shall be approved in advance by the Maricopa County Air Quality Department, Dust Control Program.

- For a partnership or sole proprietorship, a general partner or the proprietor, respectively**.**

- For a municipality, state, federal, or other public agency, the principle executive officer or ranking elected official of that entity. Delegation of signature authority needs to be submitted in writing to the Maricopa County Air Quality Department, Dust Control Program**.**

5. Application Completed By, If Not Signatory

Frequently, this person needs to be contacted if there are questions regarding how the Dust Control Plan was filled out.

SECTION 2 - PROJECT INFORMATION

6. Address Of Project Location

If no specific address is available, provide a block number and street name, Maricopa County Assessor's parcel number, or GPS coordinates. The legal description is required and can be obtained from a Phoenix Metropolitan Map Book or from the Maricopa County Assessor's parcel description.

7. Name Of Project

Name, if any, by which this project will be referred (e.g. Millionaire Acres).

8. Description Of Project

Describe the project that will be taking place on-site (e.g. 3-building commercial complex; custom home; weed control; demolition of two buildings; roadway improvement).

9. Will A Basement Or Underground Parking Be Excavated ? Will Building Occur On A Pre-Existing Pad / Prepared Pad ?

A pre-existing pad/prepared pad is considered to be on a parcel within an existing/prepared subdivision.

10. Size Of Project

The size of the project is the area that will be disturbed during the duration of the permit. Include all unpaved staging and parking areas, as well as stockpile areas (in acres or square feet). You will also need to indicate the estimated amount of import/export material to/from the project site. The estimated amount of import/export material to/from the project site is for hauling purposes and may not match the cubic yards to be moved.

11. Project Start Date, Duration Of Project, And Duration Of Project Phases

Project start date (#11) and duration of project (#11a) are used by Maricopa County to schedule inspection work load. This information is also used to determine if the same project is on-going or a subsequent dust generating operation is taking place at the project location. Information regarding duration of project phases (site clearing/mass

grading/underground utilities) (#11b) is used to determine the minimum water availability necessary for your project. Using the table provided in #11b, divide the number of days disturbed by the total acres disturbed to determine acres disturbed per day. See Page #21 for more information regarding minimum water availability.

12. Project Site Drawing

Maricopa County uses a project site drawing to delineate boundaries between separate projects, so one permit holder is not held responsible for another's work. It is also used as a reference, so it does not need to be to scale. It should however be as accurate as possible. The drawing should be no larger than 8½" x 11". It needs to include the following elements:

- Entire site boundaries (including staging areas, stockpiles, and storage)
- Linear dimensions, in feet
- Nearest public cross roads
- North arrow
- Planned exit locations
- Water supply locations

13. Soil Designations

Soil Texture

According to Rule 310, Section 304.6-Elements Of A Dust Control Plan for construction projects 1 acre or larger (except for routine maintenance and repair done under a block permit), you must provide the following information:

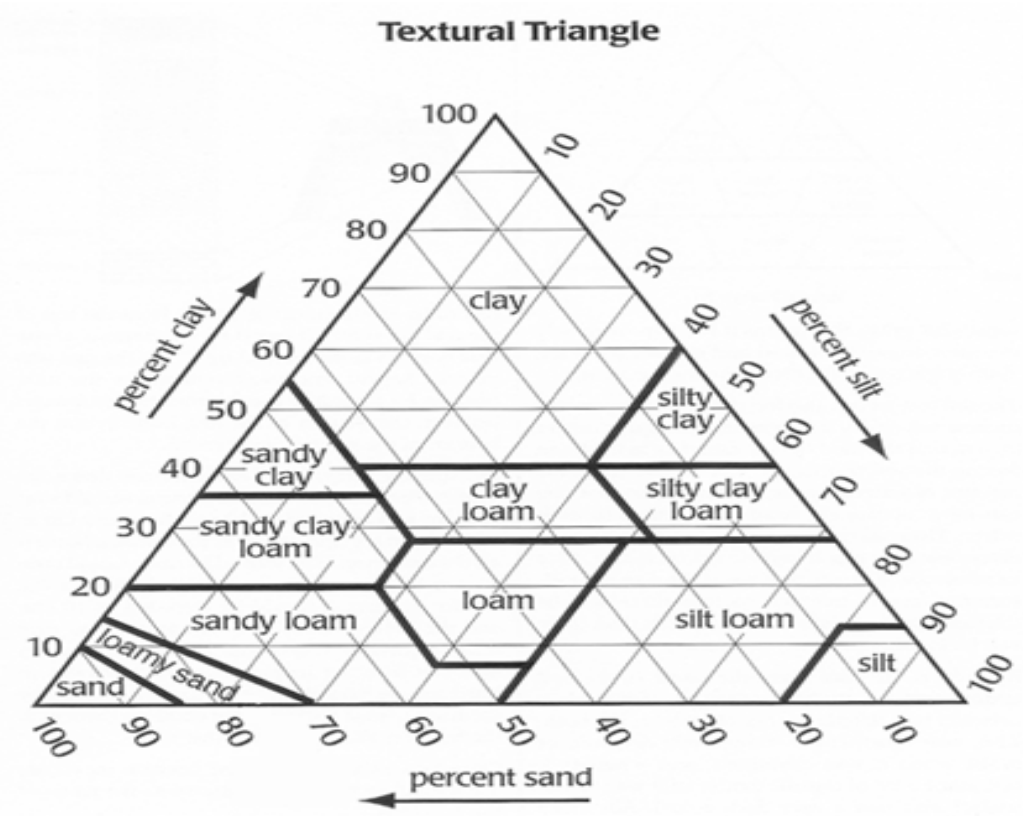
- Soil type naturally present at the dust generating operation
- Soil type to be imported onto the dust generating operation

Soil texture is the single most important physical property of the soil. Knowing the soil texture alone will provide information about: (1) water flow potential, (2) water holding capacity, and (3) suitability for many urban uses. Soils can be divided into three basic classifications: sands, silts, and clays. (Caliche, commonly found in the Southwest, is basically a form of clay. See Page #34 for more information regarding caliche).

There is great variation within the three basic classifications: sands, silts, and clays, but these classifications will suffice for the purpose of choosing appropriate dust control measures for a work site.

Soils are visually classified by the Unified Soil Classification System on the boring logs. Grain-size analysis and Atterberg Limits Tests are often performed on selected samples to aid in classification. The classification system is outlined in the chart on Page #11. For a more detailed description of the system, see "The Unified Soil Classification System" ASTM Designation D2487.

Once the amount of sand, silt, and clay is known, you can give the soil a texture class name. These names change depending on how much of each size particle is in the soil. The textural triangle (shown below) is used to determine the names of the textural classes.



Different textural classes will require more intensive water use or the use of water in combination with dust suppressants (see tables on Pages #11 and #12), so that visible emissions do not exceed 20% opacity. Test methods for opacity can be found in Appendix C of the Maricopa County Air Pollution Control Regulations.

Rule 310, Section 301-Opacity Limitation For Dust Generating Operations requires generated dust to be less than 20% opacity. See Page #15 for more information regarding opacity.

Soil Map

The soil map (from the USDA-Natural Resources Conservation Service (NRCS) Soil Survey Division) in Appendix F of the Maricopa County Air Pollution Control Regulations designates soil texture ratings within the PM_{10} nonattainment area. See Page #21 for more information regarding PM_{10} nonattainment area.

Four soil texture ratings are designated. These designations – severe, moderate, slight, and very slight – refer to a soil's potential to create PM_{10}. The table on Page #12 summarizes the soil map in Appendix F and designates control measures that could be used with certain soil types. Also, the table on Page #12 shows which soil texture rating relates to which group symbol used in the chart of the Unified Classification System For Soils on Page #11.

The soil map in Appendix F is to be used to identify soil types for purposes of completing Section 2 of the Application For Dust Control Permit, in lieu of submitting actual measured soil types with your Dust Control Plan. However, the actual measured soil types take precedence over any mapped soils.

If any requirements stated in this guidance or in the Application For Dust Control Permit contradict recommendations of a site geotechnical report, attach a copy of the report to the Dust Control Plan. The report will be incorporated as part of the Dust Control Plan.

Unified Classification System For Soils

Major Division				Group Symbol	Typical Description
Coarse-Grained Soils (less than 50% passes No. 200 sieve)	**Gravels** (50% or less of course fraction passes No. 4 sieve)	**Clean Gravels** (less than 5% passes No. 200 sieve)		GW	Well graded gravels, gravel-sand mixtures or sand-gravel-cobble mixtures
				GP	Poorly graded gravels, gravel-sand mixtures, or sand-gravel-cobble mixtures
		Gravels With Fines (more than 12% passes No. 200 sieve)	Limits plot below "A" line & hatched zone on plasticity chart	GM	Silty gravels, gravel-sand-silt mixtures
			Limits plot above "A" line & hatched zone on plasticity chart	GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (more than 50% of course fraction passes No. 4 sieve)	**Clean Sands** (less than 5% passes No. 200 sieve)		SW	Well graded sands, gravelly sands
				SP	Poorly graded sands, gravelly sands
		Sands With Fines (more than 12% passes No. 200 sieve)	Limits plot below "A" line & hatched zone on plasticity chart	SM	Silty sands, sand-silt mixtures
			Limits plot above "A" line & hatched zone on plasticity chart	SC	Clayey sands, sand-clay mixtures
Fine-Grained Soils (50% or more passes No. 200 sieve)	**Silts** (limits plot below "A" line & hatched zone on plasticity chart)	**Silts Of Low Plasticity** (liquids limit less than 50)		ML	Inorganic silts, clayey silts with slight plasticity
		Silts Of High Plasticity (liquid limit more than 50)		MH	Inorganic silts of high plasticity, silty soils, elastic silts
	Clays (limits plot above "A" line & hatched zone on plasticity chart)	**Clays Of Low Plasticity** (liquid limit less than 50)		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		Clays Of High Plasticity (liquid limit more than 50)		CH	Inorganic clays of high plasticity, fat clays, silty and sandy clays of high plasticity

Note: Coarse-grained soils with between 5% & 12% passing the No. 200 sieve and fine-grained soils with limits plotting in the hatched zone on the plasticity chart to have dual symbol.

Summary Of Soil Map In Appendix F
Of The Maricopa County
Air Pollution Control Regulations

Map Color Designations	Soil Texture Ratings	Soil Types	Group Symbol	Characteristics Of Soil	Control Measures
Red	Severe	**Clay** **Silty Clay** **Sandy Clay**	**CL** **CH**	**· Low hydraulic conductivity (the rate at which water can flow through the soil)** **· Retains water** **· Hardens in heat of summer** **· Warms-up slower in spring**	**Apply water** **Or** **Apply water and a dust suppressant**
Orange	Moderate	**Loam** **Silty Loam** **Clay Loam** **Sandy Clay**	**ML** **MH**	**· Retains more water than sandy soil** **· Drains well** **· Easier to work than clay**	**Apply water** **Or** **Apply water and a dust suppressant**
Green	Slight	**Very Fine Sandy Loam**	**SW** **SP** **SM** **SC**	**· Retains more water than sandy soil** **· Drains well** **· Easier to work than clay**	**Apply water**
Light Yellow	Very Slight	**Fine Sand** **Coarse Sand**	**GW** **GP** **GM** **GC**	**· High hydraulic conductivity (the rate at which water can flow through the soil)** **· Tends not to compact**	**Apply water**

S E C T I O N 3 - D U S T C O N T R O L P L A N

Rule 310, Section 303-Dust Control Plan Required requires the submission of a Dust Control Plan with your application. You may fill out Section 3 of the Application For Dust Control Permit and submit it as your Dust Control Plan or you may write your own Dust Control Plan describing all dust control measures to be used during the project and submit it as your Dust Control Plan.

Changes to the Dust Control Plan may be made after the application is approved by submitting a Dust Control Plan Change Form to the Maricopa County Air Quality Department. See Page #14 for more information regarding making changes to an approved Dust Control Permit and Dust Control Plan.

Things To Consider When Completing A Dust Control Plan

Unlisted Dust Control Measures

You may choose to use dust control measures not currently listed in Section 3 of the Application For Dust Control Permit. Such unlisted dust control measures will be reviewed by Maricopa County and may require additional information regarding their effectiveness. Any unlisted dust control measure must clearly meet the dust control requirements of Rule 310 for any dust generating operation.

Maricopa County will apply the following minimum criteria when evaluating any unlisted dust control measures:

- The dust control measure technique is a new or alternative technology that is demonstrated to be equally or more effective in meeting the dust control requirements than the existing dust control measures.

- Site logistics do not practically allow for implementation of a listed dust control measure as written (e.g., road width or pre-existing barriers limit the size or width of a gravel pad).

- The owner and/or operator demonstrates that a listed dust control measure is technically infeasible due to site-specific or material-specific conditions, such that implementation of the dust control measure will not provide a benefit in reducing fugitive dust (e.g., pre-soaking screened, washed rock when handling).

Written explanation and/or documentation may be required when including unlisted dust control measures in an Application For A Dust Control Permit.

Ceasing Operations

Keep in mind that weather conditions play a big part in dust control and may require that you cease operations. When planning a contingency control method, do not choose water if it is your primary control method. Maricopa County assumes that you will apply enough water to control dust, until it becomes an infeasible option.

Ceasing operations is an acceptable contingency measure many businesses currently use. At the least it requires you to stop operations, evaluate why your primary control measure is not working, and make corrections. Ceasing operations lasts as long as it takes to resolve or abate the dust control issue.

Making Changes To An Approved Dust Control Permit And Dust Control Plan

You are allowed to make changes to your approved Dust Control Permit and Dust Control Plan. Maricopa County has permit modification forms available at 1001 N. Central Avenue, 4th floor, or you can download permit modification forms from: http://www.maricopa.gov/aq.

You might have to change your Dust Control Plan if fugitive dust emissions from your project exceed the standards in Rule 310, even though you are following your Dust Control Plan. You might also have to change your Dust Control Plan if the acreage for your project changes or if the permit holder changes.

If you change your Dust Control Plan because fugitive dust emissions from your project exceed the standards in Rule 310, even though you are following your Dust Control Plan, then you must submit a revised Dust Control Plan to the Control Officer within three working days of being notified that your original Dust Control Plan is not effective. During the time that you are preparing revisions to your Dust Control Plan, you must still comply with all of the requirements of Rule 310.

In order to change your Dust Control Permit and/or Dust Control Plan for any other reason, Maricopa County accepts the following permit modification forms:

Parcel Sale Notification

Form requires permit holder name and address, parcel(s) sold, date sold, and buyer name and address.

Permit Name Change Request

Form requires existing permit holder name and address, new permit holder name and address, and reason for the permit name change. The previously approved Dust Control Plan can stay in effect or a new Dust Control Plan can be submitted for review and approval.

Permit Cancellation Request

Form requires permit holder name and address, project location, reason for cancellation, verification that no further soil disturbing construction activities will occur, and that soils have been permanently stabilized. You must cancel/close-out your Dust Control Permit when your project is complete or when you no longer have control over the day-to-day operations on the site.

Permit Acreage Change Request

Form requires permit holder name & address, reason for acreage change, and the new acreage. The original Dust Control Permit expiration date will not change, it will remain the same. A new site plan must also be submitted showing the increase site area. Sites that increase to 1 acre or more require modifications to the originally submitted Dust Control Plan. A project information sign is required for sites of five acres or more.

Dust Control Plan Change

Form requires permit holder name and address, reason for the Dust Control Plan change, and sections of plan to be changed. The revised Dust Control Plan must be submitted with the form and a new site plan might be required.

Vehicle Speed

Vehicle speed is not an acceptable dust control measure for all dust generating operations. Where vehicle speed is an option for dust control, you must indicate what vehicles are being limited by speed and how the speed of such vehicles is being limited.

Opacity

Rule 310, Section 301-Opacity Limitations For Dust Generating Operations requires generated dust to be less than 20% opacity. As a general rule of thumb, if at any time you can see dust being generated by equipment operations, it is already at least 10% opacity.

Opacity is measured by looking through the dust plume, while the sun is at your back. If more than 20% of the background is obscured, then the opacity is greater than 20%.

Vegetative Ground Cover

If you choose “establish vegetative ground cover” as a control measure, you must comply with at least one of the following standards. These standards are also described in Rule 310, Section 302.3-Stabilization Requirements For Dust Generating Operations-Open Area And Vacant Lot Or Disturbed Surface Area:

- Maintain a flat vegetative cover (i.e., attached/rooted vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%;

- Maintain a standing vegetative cover (i.e., vegetation that is attached/rooted with a predominant vertical orientation) that is equal to or greater than 30%;

- Maintain a standing vegetative cover (i.e., vegetation that is attached/rooted with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements; or

- Maintain a percent cover that is equal to or greater than 10% for non-erodible elements.

Surface Gravel, Recycled Asphalt, Or Other Suitable Material

If you choose "apply and maintain surface gravel, recycled asphalt, or other suitable material" as a control measure <u>for unpaved haul roads/access areas</u>, you must comply with the following standard. This standard is also described in Rule 310, Section 302.2-Stabilization Requirements For Dust Generating Operations-Unpaved Haul/Access Roads:

- Do not allow visible dust emissions to exceed 20% opacity and either do not allow silt loading to be equal to or greater than 0.33 oz/ft^2 or do not allow silt content to exceed 6%.

If you choose to "apply and maintain surface gravel, recycled asphalt, or other suitable material" as a control measure <u>for unpaved parking lots</u>, you must comply with the following standard. This standard is also described in Rule 310, Section 302.1-Stabilization Requirements For Dust Generating Operations-Unpaved Parking Lot:

- Do not allow visible fugitive dust emissions to exceed 20% opacity and either do not allow silt loading to be equal to or greater than 0.33 oz/ft^2 or do not allow silt content to exceed 8%.

INSTRUCTIONS FOR COMPLETING SECTION 3 IN APPLICATION FOR DUST CONTROL PERMIT

What follows is a table of contents that lists the ten section headings (A-J) that corresponds to the same section headings (A-J) in Section 3 of the Application For Dust Control Permit. Under each of the ten section headings (A-J) that follow are questions to ask yourself and things to consider when designing your Dust Control Plan.

When completing the Application For Dust Control Permit, use this table of contents to select dust control measures for your project. Changes to the Dust Control Plan may be made after the application is approved by submitting a Dust Control Plan Change Form to the Maricopa County Air Quality Department. See Page #13 for more information regarding making changes to an approved Dust Control Permit and Dust Control Plan.

A. Vehicles / Motorized Equipment

1. Use In Open Areas

Consider This: How will you keep vehicles, including the public, employees, subcontractors, utilities, and project inspectors, out of the areas not intended for travel?

2. Unpaved Parking Lots

Consider This: What areas have you set aside for parking, including areas where your employees and contractors will be parking their vehicles? What areas have you set aside for material staging?

3. Unpaved Haul Roads / Access Areas

Consider This: Will you be operating, hauling, or delivering equipment or materials using unpaved areas?

Unpaved haul roads/access areas are unpaved roads or designated access areas for vehicles or delivery trucks. On most single residential sites, the haul road is typically the future driveway. Paving is acceptable as a primary control measure, if paving is done at the beginning of a project.

B. Disturbed Surface Areas

1. Before Dust Generating Operations Occur

Consider This: Create a plan to minimize dust before you start site work. You must comply with the work practice standards described in Rule 310 and you must implement, as applicable, the dust control measures in Rule 310, Tables 1 - 21. Tables 1 - 21 describe primary and contingency dust control measures for a variety of dust generating operations. For example, Table 5 lists dust control measures to implement before site work begins. According to Table 5, you must either pre-water the site to depth of cuts allowing time for penetration or you must phase work to reduce the amount of disturbed surface areas at any one time.

If you choose to pre-water the site, you should pre-water the areas to be disturbed prior to commencing a dust generating operation. A rule of thumb is 1 acre-foot of water (325,851 gallons) per acre of land. Pre-watering areas to depth of cuts will reduce the amount of water required for dust control. Pre-watering does not mean flooding the area to be disturbed, which may make the area unworkable. Nor does it mean allowing the watered area to dry-out before the dust generating operation occurs, since that would prevent adequate dust control.

If you choose to phase work as a dust control measure to reduce the amount of disturbed surface areas at any one time, you must show how you will phase the project to create the least amount of disturbance at any one time. You may use the project site drawing to show the various project phases, along with a time line showing relative start and stop times. Indicate on the line provided in line application, for describing major project phases that you have shown the various project phases on the project site drawing.

2. During Dust Generating Operations

Consider This: Water must be applied continuously in front of or in conjunction with a scraper/grader/dozer. Water applied behind equipment is usually intended for compaction purposes and not dust control. If a water truck is required to leave the project site for refilling, the contingency measure must be implemented, as needed, to comply with Rule 310, Section 301-Opacity Limitation For Dust Generating Operations.

If you choose to limit vehicle speed, you must indicate what vehicles are being limited by speed and how the speed of such vehicles is being limited.

3. Temporary Stabilization Including Weekends, After Work Hours, Holidays, And Periods Up-To 8 Months

Consider This: How are you going to stabilize your site during non-work hours? How will you control wind generated dust?

4. Permanent Stabilization Of Open Areas And Vacant Lots Required Within 8 Months Of Ceasing Dust Generating Operations

Consider This: How will the open areas of the site be permanently stabilized? How will the site be stabilized if construction is halted?

Open areas and vacant lots need to remain stabilized (i.e., maintain a visible crust, vegetation, or surface gravel) and unaccessible to motorized vehicles. When your site is permanently stabilized and your project is complete, you should cancel/close-out your Dust Control Permit. Maricopa County has permit cancellation request forms available at 1001 N. Central Avenue, 4th Floor, or you can download the form from: http://www.maricopa.gov/aq.

C. Bulk Material Handling

1. Prior To And/Or During Stacking, Loading, And Unloading Operations

Consider This: Will you be trenching, backfilling, and/or importing/exporting?

Stacking, loading, and unloading operations include any time bulk materials are loaded into a truck or when materials are put into spoils piles from trenching operations.

If you choose to use water to control dust for cut and fill activities, a rule of thumb is (1) 10,000 gallon water pull for each 7,000 cubic yards of material moved per day. When determining the total amount of water necessary for a project, another rule of thumb is that it takes at least 30 gallons of water to control dust from each cubic yard of material to be moved.

2. Open Storage Piles

Consider This: How will you control dust from any storage or spoils piles? Will you have spoils and/or storage piles for any length of time?

Open storage piles include piles that are on-site for any length of time. If you apply water or dust suppressant(s) to open storage piles when not conducting stacking, loading, and unloading operations, make sure that you limit unauthorized vehicle access to the area.

3. On-Site Hauling Within The Boundaries Of The Work Site And Crossing A Paved Area Accessible To The Public

Consider This: Crossing a paved area is when you are traveling perpendicular to the paved area. If you are not crossing a paved area (not traveling perpendicular to a paved area), then you are traveling along the paved area. Traveling along the paved area may take you outside the work area, unless such area has been barricaded to public travel.

4. On-Site Hauling Within The Boundaries Of The Work Site

Consider This: Will you be moving dirt or rock from one area to another area on your site?

5. Off-Site Hauling Onto Paved Areas Accessible To The Public

Consider This: Will you be conducting debris clean up or lot clean up? Will you be exporting materials?

D. Trackout, Carryout, Spillage, And Erosion

1. Trackout Control Device

Consider This: What will you use as a trackout control device if trenching removes an existing gravel pad? What will you use as a control device during curb and gutter installation? How will you direct traffic to the designated exit locations and restrict traffic from using other exit points?

Trackout control devices are preventative devices intended to reduce the amount of dirt transferred onto paved areas and entrained into the atmosphere. Trackout control devices are required at every exit to a paved area accessible to the public (any retail parking lot or public roadway that is open to public travel primarily for purposes unrelated to the dust generating operation) for job sites 2 acres or larger or when 100 cubic yards of bulk material are hauled on-site or off-site per day. Trackout control devices include, but are not limited to, the following:

Gravel Pad

A layer of washed gravel, rock, or crushed rock that is at least one inch or larger in diameter that is maintained at the point of intersection of a paved area accessible to the public and a work site entrance to dislodge mud, dirt, and/or debris from the tires of motor vehicles and/or haul trucks, prior to leaving the work site.

Grizzly

A device (i.e., rails, pipes, or grates) used to dislodge mud, dirt, and/or debris from the tires and undercarriage of motor vehicles and/or haul trucks prior to leaving the work site.

Paving

Application and maintenance of asphalt, concrete, or other similar material to a roadway surface (i.e., asphaltic concrete, concrete pavement, chip seal, or rubberized asphalt).

Wheel Wash System

A system, station, or device either temporary or permanent, that utilizes a bath or spray of water for the purpose of cleaning mud, soil, and rock from the tires and undercarriage of vehicles to prevent tracking of those materials onto paved surfaces.

Rule 310, Table 17 lists dust control measures for trackout control. According to Table 17, you must prevent trackout by installing, at all access points to the site, a grizzly, a wheel wash system, or a gravel pad at least 30 feet wide, 50 feet long, and 6 inches deep. Or you must pave starting from the point of intersection with a paved area accessible to the public and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.

If you are using a paved area accessible to the public as the trackout control device, then the paved area accessible to the public must be part of your designated work site. You must identify such paved area accessible to the public as a trackout control device in your Dust Control Plan and you must follow the requirements for maintaining a trackout control device. See Rule 310, Section 308.3-Work Practices-Trackout, Carryout, Spillage, And/Or Erosion and Table 17.

It is a violation of Rule 310 if your site is required to have a trackout control device and does not, regardless of whether trackout is present.

2. Cleaning

Consider This: Trackout/carryout is any and all bulk materials that adhere to and agglomerate on the surfaces of motor vehicles, haul trucks, and/or equipment (including tires) and that have fallen or been deposited onto a paved area accessible to the public. You are required to immediately clean trackout/carryout extending more than 50 feet. Trackout/carryout that is less than 50 feet requires cleaning by the end of the work day. During import/export operations and following rain events, cleaning may need to be done on a consistent basis to control trackout/carryout.

Cleaning trackout/carryout includes removing any and all bulk material that has been deposited onto public roadways, medians, gutters, and sidewalks. Cleaning trackout/carryout can be accomplished by manually sweeping up the deposits, by

operating a street sweeper or wet broom, or by power washing. Some street sweepers (e.g., street sweepers with steel brushes) are more efficient than others, especially on stubborn trackout/carryout. Many work sites are located in areas where the paved areas may not be cleaned by power washing with water due to Storm Water Pollution Prevention Plans (SWPP) or National Pollutant Discharge Elimination Standards (NPDES).

It is a violation of Rule 310 if you have not cleaned trackout/carryout, regardless of whether a trackout control device is present. If a street sweeper has been chosen as the primary control measure and is needed immediately but is not available, then you must employ the contingency measure.

E. Weed Abatement By Discing Or Blading

Consider This: If this is a long project, will weed removal or weed control be an issue in the future? A Burn Permit may be required if grubbing material is disposed of through burning. Maricopa County has Burn Permit applications available at 1001 N. Central Avenue, 4th Floor, or you can download a Burn Permit application from: http://www.maricopa.gov/aq

F. Blasting Operations

Consider This: Will blasting be conducted for removal of structural concrete? Is there an available site for stockpiling material? Will underlying material require blasting?

G. Demolition Activities

Consider This: If concrete removal quantity is sizable, is there an available dump site?

H. Wind Event

Consider This: A “wind event” is when the 60-minute average wind speed is greater than 25 m.p.h. In Section H, some control measures are to be used in the "nonattainment area" and some control measures are to be used in the "attainment area". A "nonattainment area" is an area designated by the Environmental Protection Agency (EPA) as exceeding national ambient air quality standards based upon data collected through air quality monitoring.

Maricopa County does not meet the national ambient air quality standards for particulate matter (PM_{10}). Consequently, Maricopa County is considered a nonattainment area for PM_{10}. The geographical boundary of Maricopa County's PM_{10} nonattainment area is as follows: Salt River Mountains on the south, Phoenix Mountains on the northwest, Estrella Mountains on the southwest, White Tank Mountains on the west, and Superstition Mountains on the east. Maricopa County's PM_{10} nonattainment area includes all cities within this geographical boundary.

I. Water

Consider This: For Sections A-H in Section 3 of the Application For Dust Control Permit, for which you choose to "apply water" as a dust control measure, you must describe the size and number of the equipment that you will use to supply

the water, and the size and number of pieces of equipment that you will use to apply the water.

Water supply means how water will supplied to the site. Equipment options for water supply include, but are not limited to, metered hydrant, water tower, and water pond.

Water application system means how water will be applied to the site. Equipment options for water application system include, but are not limited to, hoses, water truck, water pull, and water buffalo.

Minimum water availability means water supply in conjunction with water application system.

A minimum water availability table is included for different construction phases to be used in Section 3 where “apply water” is chosen as a dust control measure. Each minimum water availability table lists the minimum amount of water that you must have available for the duration of the project for dust control and compaction in severe and moderate soil types. Use each minimum water availability table to determine the size and number for the equipment that you will use to supply the water and to apply the water.

What follows are examples of how to use the minimum water availability tables. Although the following examples regard determining how much water must be available to control fugitive dust during dust generating operations (when completing Section 3, (B)(2) in the Application For Dust Control Permit), the same "math" can be applied when determining how much water must be available to control fugitive dust for other construction phases of dust generating operations in Section 3 that include "apply water" as a dust control measure.

Example #1: If your project entails moving 3,000 cubic yards of material and your project is estimated to take six days, then the minimum water availability for the project would look like this:
3,000 cubic yards to be moved x 30 gallons per cubic yard of material moved = 90,000 gallons total for all six days.
Examples of water supply and water application systems that might be chosen:

- One 15,000 gallon water truck each day

Example #2: If your project entails grading 10 acres and all 10 acres are to be graded each day for five days during March thru October, then the minimum water availability for the project would look like this:
10 acres x 10,000 gallons per acre per day = 100,000 gallons for all 10 acres x 5 days = 500,000 gallons total for all five days.
Examples of water supply and water application systems that might be chosen:

- Ten 10,000 gallon water trucks each day for all five days

Example #3: If your project entails grading a total of 10 acres and one acre is to be graded each day over a 10 day period during March thru October, then the minimum water availability for the project would look like this:
10 acres x 10,000 gallons per acre per day = 100,000 gallons for all 10 acres.
To grade one acre per day requires 10,000 gallons.

Examples of water supply and water application systems that might be chosen:

- One 10,000 gallon water truck each day
- Two 5,000 gallon water trucks each day

Regardless of the minimum amount of water that you have available to your site or on your site and regardless of your water supply and water application, in no case shall you exceed the 20% opacity. Test methods for opacity can be found in Appendix C of the Maricopa County Air Pollution Control Regulations.

Project Phase - Site Clearing/Removal of Vegetation/Debris/Demolition

Soil Texture Rating	**Total Acres Disturbed**	Minimum Water Available
Severe (clay, silty clay, sandy clay)	0 - 2 acres	500 - 1,000 gallons per day
	2 - 10 acres	1,000 - 5,000 gallons per day
	10 - 100 acres	5,000 - 50,000 gallons per day
	> 100 acres	> 50, 000 gallons per day
Moderate (all other classifications)	0 - 2 acres	300 - 600 gallons per day
	2 - 10 acres	600 - 3,000 gallons per day
	10 - 100 acres	3,000 - 30,000 gallons per day
	> 100 acres	> 30,000 gallons per day

Project Phase - Mass Grading
(Includes basements)

Soil Texture Rating	**Minimum Water Available (November – February)**	**Minimum Water Available (March – October)**
Severe (clay, silty clay, sandy clay)	5,000 gallons per acre per day	10,000 gallons per acre per day
	and	and
	30 gallons per cubic yard of material moved	30 gallons per cubic yard of material moved
Moderate (all other classifications)	5,000 gallons per acre per day	10,000 gallons per acre per day
	and	and
	30 gallons per cubic yard of material moved	30 gallons per cubic yard of material moved

Project Phase - Underground Utilities

Soil Texture Rating	Total Acres Disturbed	Minimum Water Available
Severe (clay, silty clay, sandy clay)	0 - 2 acres	500 - 1,000 gallons per day
	2 - 10 acres	1,000 - 5,000 gallons per day
	10 - 100 acres	5,000 - 50,000 gallons per day
	> 100 acres	> 50, 000 gallons per day
Moderate (all other classifications)	0 - 2 acres	300 - 600 gallons per day
	2 - 10 acres	600 - 3,000 gallons per day
	10 - 100 acres	3,000 - 30,000 gallons per day
	> 100 acres	> 30,000 gallons per day

Project Phase - Unpaved Haul Roads/Access

Soil Texture Rating	Total Acres Disturbed	Minimum Water Available
Severe (clay, silty clay, sandy clay)	0 - 2 acres	375 - 750 gallons per day
	2 - 10 acres	750 - 3,500 gallons per day
	10 - 100 acres	3,500 - 35,000 gallons per day
	> 100 acres	> 35,000 gallons per day
Moderate (all other classifications)	0 - 2 acres	225 - 400 gallons per day
	2 - 10 acres	400 - 2,250 gallons per day
	10 - 100 acres	2,250 - 22,500 gallons per day
	> 100 acres	> 22,500 gallons per day

Project Phase - Vertical/Paved

Soil Texture Rating	Total Acres Disturbed	Minimum Water Available
Severe (clay, silty clay, sandy clay)	0 - 2 acres	250 - 500 gallons per day
	2 - 10 acres	500 - 2,500 gallons per day
	10 - 100 acres	2,500 - 25,000 gallons per day
	> 100 acres	> 25,000 gallons per day
Moderate (all other classifications)	0 - 2 acres	150 - 300 gallons per day
	2 - 10 acres	300 - 1,500 gallons per day
	10 - 100 acres	1,500 - 15,000 gallons per day
	> 100 acres	> 15,000 gallons per day

Project Phase - Staging/Parking Areas

Soil Texture Rating	Total Acres Disturbed	Minimum Water Available
Severe (clay, silty clay, sandy clay)	0 - 2 acres	375 - 750 gallons per day
	2 - 10 acres	750 - 3,500 gallons per day
	10 - 100 acres	3,500 - 35,000 gallons per day
	> 100 acres	> 35,000 gallons per day
Moderate (all other classifications)	0 - 2 acres	225 - 400 gallons per day
	2 - 10 acres	400 - 2,250 gallons per day
	10 - 100 acres	2,250 - 22,500 gallons per day
	> 100 acres	**> 22,500 gallons per day**

Soil Texture Rating	Project Phase - Structure Excavation (Includes stem walls, footings, culverts, abutments, caissons)	
	Total Acres Disturbed	**Minimum Water Available**
Severe (clay, silty clay, sandy clay)	0 - 2 acres	500 - 1,000 gallons per day
	2 - 10 acres	1,000 - 5,000 gallons per day
	10 - 100 acres	5,000 - 50,000 gallons per day
	> 100 acres	> 50, 000 gallons per day
Moderate (all other classifications)	0 - 2 acres	300 - 600 gallons per day
	2 - 10 acres	600 - 3,000 gallons per day
	10 - 100 acres	3,000 - 30,000 gallons per day
	> 100 acres	> 30,000 gallons per day

Soil Texture Rating	**Project Phase - Fine Grading**	
	Total Acres Disturbed	**Minimum Water Available**
Severe **(clay, silty clay, sandy clay)**	**0 - 2 acres**	**500 - 1,000 gallons per day**
	2 - 10 acres	**1,000 - 5,000 gallons per day**
	10 - 100 acres	**5,000 - 50,000 gallons per day**
	> 100 acres	**> 50, 000 gallons per day**
Moderate **(all other classifications)**	**0 - 2 acres**	**300 - 600 gallons per day**
	2 - 10 acres	**600 - 3,000 gallons per day**
	10 - 100 acres	**3,000 - 30,000 gallons per day**
	> 100 acres	**> 30,000 gallons per day**

J. Dust Suppressants

Consider This: Although water is a dust suppressant, the information required by Table J in Section 3 in the Application For Dust Control Permit should not include information on water supply and water application system.

The information required by Table J in Section 3 of the Application For Dust Control Permit is for all other dust suppressants that you use. Fill out the applicable areas in Table J in Section 3 of the Application For Dust Control Permit. Be sure to attach information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application. Also, attach product specification(s) and application sheet(s) or label instructions.

Different types of soil requires more intensive water use or the use of water in combination with dust suppressants, in order to meet the requirements of Rule 310. Descriptions of dust suppressants are on the following pages. Also on the following pages are descriptions of surfactants, tackifiers, and flocculants, which are categories of dust suppressants.

DUST SUPPRESSANTS

Dust suppressants are defined in Rule 310 as: water, hygroscopic material, solution of water and chemical surfactant, foam, non-toxic chemical stabilizer or any other dust palliative, which is not prohibited for ground surface application by the Environmental Protection Agency (EPA) or the Arizona Department Of Environmental Quality (ADEQ) or any applicable law, rule, or regulation, as a treatment material for reducing fugitive dust emissions.

Dust suppressants work by either agglomerating the fine particles, adhering/binding the surface particles together, or increasing the density of the road surface material. They reduce the ability of the surface particles to be lifted and suspended by either vehicle tires or wind.

Dust suppressants help provide the desired level of dust control with a minimum amount of moisture. While using dust suppressants appears to add to the cost of dust control, careful analysis shows that the benefits of dust suppressants typically reduce dust control costs compared to mechanical collectors and/or water alone.

Selection of the best dust control measures must include an understanding of not only the primary factors that generate dust (vehicle speed, number of wheels per vehicle, particle size distribution (gradation) of the surface material, and surface moisture) but also the long-term cost and environmental impacts of such control measures. Long-term costs include application of dust suppressants in conjunction with the number of times the dust suppressant needs to be applied and the expected change in maintenance practices. Environmental considerations generally include impacts to the water quality and plant community.

C A T E G O R I E S O F D U S T S U P P R E S S A N T S

Traditional dust suppressants generally fall into the following categories:

Water-Attracting Chemicals

Chlorides, Salts, Brine Solutions

- Water-attracting chemicals provide the most satisfactory combination of application ease, durability, cost, and dust control for semi-arid, semi-humid, and humid climates. Their effectiveness is limited, however, and may not provide sufficient dust control for a second year. Subsequent applications may be made at reduced rates because of residual effects.

- The products in this category are corrosive to metals and may not be acceptable if vehicle exposure to corrosive materials is not advisable or if relatively frequent vehicle washing is not possible.

Organic, Non-Bituminous Chemicals

Lignosulfonates, Sulphite, Liquors, Tall Oil Pitch, Pine Tar, Vegetable Oils, Molasses

- Organic, non-bituminous chemicals perform best under arid and semi-arid conditions but are less effective on igneous, crushed gravel, and medium-to low-fine materials. As with water-attracting chemicals, the effectiveness of organic, non-bituminous chemicals is limited and may not provide sufficient dust control for a second year, but subsequent applications may be made at reduced rates because of residual effects.

- The products in this category fail after rains because organic, non-bituminous products have long curing times and are generally leached-out. Some of the products in this category may be visually unappealing, odorous, and very sticky upon application.

Electro-Chemical Stabilizers

Sulphonated Petroleum, Ionic Stabilizers, Bentonite

- Electro-chemical stabilizers work over a wide range of climatic conditions, are least likely to leach-out, and are particularly effective on clayey or sandy surface materials. A large variety of these materials are available to road construction and maintenance engineers and, when applied under highly trafficked-surface and aggregate conditions, have been shown to reduce dust generation dramatically.

- These products have no standard laboratory tests for predicting their performance under field conditions and their use often results in either unqualified success or utter failure.

Polymers

Polyvinyl Acrylics, Acetates

- Polymers bind surface soil particles together and form a semi-rigid film on the trafficked surface. Most polymer products are supplied in concentrated form and require dilution with water before application. With slight variations in dilution and final application rates, polymers are generally suitable for use under a wide range of soil and climatic conditions.

- Most polyvinyl acrylics and acetates are considered non-toxic and environmentally friendly when used according to manufacturer recommendations. They are most effective on lightly trafficked surfaces such as helicopter landing surfaces in arid, semi-arid, semi-humid, and humid zones that receive between 8-40 inches of precipitation per year.

Microbiological Binders

Cryptogams, Blue-Green Algae Inoculants, Enzyme Slurries

- Microbiological binders are especially important in arid climates, as cryptogam bind soil particles together, thereby reducing the movement of dust particles. Inoculants that can be applied easily and evenly are currently under development. Many enzymes are absorbed by clay particles, resulting in a compression of the pore space that aids in compaction and reduces dust generation.

- These products have been very successful under highly specific trafficked-surface and aggregate conditions. Without standard testing procedures to predict their performance under field conditions, small-scale trials should be initiated and evaluated for efficacy prior to large-scale application.

DUST SUPPRESSION TECHNOLOGY

In addition to categories of dust suppressants, dust suppression is also categorized by dust suppression technology. Dust suppression technology is described below.

Wetting Agents

Wetting agents are surfactant formulations (see the following section for more information about surfactants) that improve the ability of water to wet and agglomerate fine particles. Available products range from single component commodity surfactants to specialty chemical formulations that contain blends of surfactants with organic and inorganic additives. Binding agents may also be used for long-term (residual) dust control effects.

Foaming Agents

Foaming agents are used to convert water and air into foam. Dust control foam is a dry, stable, small-bubbled foam with a consistency similar to shaving cream. Foaming agents are primarily high foaming surfactants and may also contain wetting and binding agents. Foaming agents function similarly to liquid spray wet suppression, in that the foamed liquid wets and agglomerates fine particles.

Binding / Agglomerating Agents

Binding/agglomerating agents provide long-term (residual) dust control compared to water (wetting agents or foaming agents). Water-based products are applied as liquid sprays or foams. Therefore, all of the criteria described for wetting agents and foaming agents also pertain to binding/agglomerating agents. Binding agents are used when it is either impractical or uneconomical to control dust using water-based technologies (wetting agents or foaming agents).

Crusting Agents

Crusting agents are binding agents used for long-term (residual) surface stabilization. The chemistry of crusting agents is similar to latex paint. The primary active components are water-based latex polymers that cure to form a mechanically stable water-insoluble film. Wetting and/or viscosity modifiers may be added to affect the rate and degree of liquid penetration into the bulk solid surface. Field application techniques are similar to spray painting an irregular surface with exterior latex paint. A primer or seal coat and 1–2 finish coats of crusting agent should be applied for complete coverage. Allow time to dry (cure) between coats and treat 24–48 hours prior to forecasted rain.

S U R F A C T A N T S

Water is a very effective dust control material, as it wets small dust particles and forces the particles to adhere to each other and agglomerate. In situations where water is scarce or it is impractical to wet surfaces daily, an additive can be used to achieve longer lasting results. A surfactant, or surface-active agent, makes water more efficient by making water “wetter”. Water becomes "wetter" by lowering its surface tension. With the addition of a surfactant as a part of a routine watering program, drops of water spread out and contact surfaces more effectively

Additionally, with the addition of a surfactant, after the water evaporates, the dust particles must remain agglomerated. Surfactants do not evaporate and are residual. They continue to work after the surface appears dry. The duration of this effect is dependent upon temperature, friction, and run off. Most surfactants are biodegradable and their concentration will decrease over time.

By adding surfactants to water in the right blend, you can maximize the effectiveness of water. Sometimes, the longer you use a surfactant the better the results because you get a cumulative residual effect.

In a study regarding the effects of surfactants (by water sprays) on dust suppression in a limestone crushing plant, four surfactants were used. The collection efficiency of water sprays at 20 psi – 60 psi water pressure using water with no surfactant and using water with 0.01% surfactant were studied using 3 types of nozzles. The results showed that the addition of 0.01% surfactant could improve dust collection efficiency from 30% - 75%.

T A C K I F I E R S

Tackifiers are substances used with water to hold together mulches and other dust suppressants. A tackifier binds small particles together without forming a hard crust. Many dust suppressants can be used in a dilute form as a tackifier. Tackifiers can be used as dust control on dirt roads or in construction projects, for silt control, to prevent storm water run off, and for slope stabilization.

Lots of materials have been tried through the years as a tackifier to help hold hydro-seeding fast to the ground, during the early stages of germination. Today's tackifiers primarily fall into two categories: (1) "PAM" tackifier and (2) Guar (organic polysaccharide) based product. Other products used as tackifiers or used in tackifiers include, but are not limited to, psyllium or platago husks, clay components, and gelling agents.)

"PAM" Tackifier

The "PAM" tackifier is based on an acrylamide copolymer. PAM type tackifiers are granular and look like sugar or salt. They most often come in a convenient 3-pound jug. A jug will provide holding power for about 1 acre of hydro-seeding. PAM type tackifiers hold best once the mulch mat has dried completely one time.

Guar (Organic Polysaccharide) Based Product

Guar products are more powdery in appearance. The application rate is often in the 20 pounds – 60 pounds per acre. They usually come in bags and are not quite as convenient as the PAM type tackifiers. Guar based tackifiers need less curing time than PAM type tackifiers.

F L O C C U L A N T S

A typical method for controlling or suppressing dust is to apply a water spray. However, water sprays only control dust for a short period of time depending upon environmental conditions. The application of the spray has to be repeated frequently to provide ongoing dust control. Experiments have been conducted to discover other methods and/or treatments to control dust emissions. Using flocculants is one such method.

A flocculant is a chemical that causes a dispersed colloidal system (such as clay) to coagulate and form flocs. Most flocculants are either multivalent cations such as calcium, magnesium, aluminum, or lon polymers. High pH, high salinity, and high temperature can also cause clay flocculation.

Experiments With Flocculants

Some experiments that have been conducted include the following:

- Aqueous foamable compositions have been used to suppress coal dust. The composition contains water, an interpolymer of a polymerizable vinyl ester, a partial ester compound interpolymerizable with the vinyl ester, and a detergent wetting agent. The interpolymer binds coal dust and keeps the dust particles encapsulated after the foam has collapsed.

- A combination of an organic polymer latex such as a styrene-butadiene interpolymer and a silicone applied to the surface of a coal pile or other mass of finely divided particulate materials. In addition, a wetting agent may be incorporated to prevent premature coagulation. The combination is applied as an aqueous mixture such as by spraying.

- The suppression of dust with an aqueous foam comprising a foaming agent and an elastomeric water insoluble polymer. The foam provides immediate dust suppression and eases application. The polymer coats the material and continues to suppress dust generation during handling of the material after the foam has collapsed.

- The use of at least one methacrylate polymer for dust suppression. The methacrylate polymer provides dust suppression when applied to a wide variety of materials. After application the polymer provides a tacky, water resistant coating which effectively prevents dusting while additionally acting as an anti-freeze agent.

- A combination of water soluble anionic acrylic polymers and nonionic glycol polymers and anionic and nonionic surfactants useful for the control of dust emissions into the environment.

- A study regarding the potential of polyethylene oxide (PEO) solutions as a fugitive dust suppressant was conducted at the Global Institute For Energy And

Environmental Systems. It was concluded that polymers help in soil stabilization due to their ability to bind fine particles together into sizes that may be too heavy to be airborne. The effectiveness of a polymer liquid or aqueous polymer solution on soil particles may be variable depending on soil mineralogy, polymer characteristics, and physio-chemical conditions. Aqueous PEO at a concentration of about 2 g/L showed low liquid loss when the soil was exposed to a temperature of 25°C and relative humidity of 30%. This was indicative of liquid retention that would minimize the potential of dust release. Test results proved a first-level indication of the reasonably good potential of low aqueous concentration of PEO as a dust suppressant.

Flocculant Products

A product called “Terra-Mulch Tacking Agent 3®” contains the known flocculant - polyacrylamide (PAM). (See discussion of tackifiers earlier in this document for more information regarding PAM). In 1994, Tacking Agent 3® (Tack 3) was evaluated by a major turf university to determine its value as a soil stabilizer. Tack 3® was applied alone at a rate of 60 lbs per acre on a 45% slope. The test plots were subjected to simulated rainfall of 12 inches per hour for 30 minutes. The simulation took place within 2 hours of seeding. Tack 3® reduced erosion (versus the control) by 68.8% and reduced water runoff by 21.7%.

C A L I C H E

Caliche is defined as an amorphous (non-crystalline) mass of calcium carbonate (limestone) mixed with clay. Caliche is a general term for any secondary calcium carbonate ($CaCO_3$) that forms in sediments or in voids and crevices within bedrock just below the surface in semiarid regions, as a result of soil-forming processes (pedogenic caliche) or ground-water evaporation (ground-water caliche). Caliche is material left behind by the evaporation of ground water or soil moisture that is no longer present at that level, although ground water may be present at much lower depths beneath the caliche.

Caliche forms due to the rise and fall of mineral-rich groundwater during wet and dry seasons. When the water rises it deposits calcium carbonate into the soil which accretes into caliche nodules. The length of time it takes for certain size nodules to grow, and at what distance from the surface, is well known. In paleontology, caliche is therefore an excellent indicator of how long a layer of soil existed before it changed due to erosion or deposition.

Caliche has several forms:

- Thin, white crusts or rinds on individual pebbles and fillings in pores and crevices in soil or bedrock;
- Discrete, hard, white nodules or lumps; or
- Thick, massive, rock-hard accumulations that cement gravel, sand, and fines of a sediment, producing a dense and impermeable layer that resembles fresh-water limestone. Such massive caliche layers (calcretes) are common in deserts at depths of a few centimeters to about 2 meters. The layers are a few centimeters to several meters thick.

Occasionally, caliche acts as a barrier to percolation of soil moisture from precipitation, helping to retain seasonal moisture near the root zone in vegetated areas. Some alluvial fans eventually become so plugged with caliche that surface runoff can no longer percolate into the gravel, producing short-lived but disastrous flooding in their terminal regions.

In arid and semiarid regions, the $CaCO_3$ comes from capillary rise and evaporation of $CaCO_3$-charged ground water from dust (containing calcite or calcium carbonate) blown by wind and then driven into the soil by episodic rainfall, and from infiltration of soils, sediments, and rocks by runoff from areas containing sources of $CaCO_3$ (primarily limestones). In vegetated areas $CaCO_3$ can precipitate out around the roots of plants. The relative contributions to caliche formation by these various processes, and the time relations represented by the different types of caliche in general, are not well defined.

Because water must be present in the soil or at the water table to evaporate and leave behind the $CaCO_3$, formation of caliche requires a climate that is semiarid to subhumid, but caliche commonly persists as a persistent remnant feature in areas whose climate has changed to arid or extremely arid, as have parts of the Sahara and the southwestern U.S. It does not persist in areas that have become wetter, because there it is dissolved and leached from the soil. In the Sahara, the removal of overlying soil layers by wind has exposed the calichified zone of underlying alluvial sediment. The exposed caliche (calcrete) weathers to a dark-gray, very hard "kunkur" that resembles bedrock. In many areas, especially in broad alluvial valleys, it is only thinly veneered by windblown sand and provides a solid substrate beneath the sand plain. The presence of caliche less than a meter beneath loose sand in arid regions can be detected on many L Band radar images acquired by spacecraft. Certain tones, textures, and colors on Landsat multispectral images can also be used to delineate large exposed areas of caliche deposits.

Because caliche is common in sediments of alluvial plains, these plains will support vehicular traffic, and movement across areas underlain by caliche can be rapid. The presence of massive, hard caliche (calcrete) beneath a few centimeters of loose surficial sand makes these surfaces easily trafficable, for the caliche will support trucks and other wheeled vehicles, whereas deep, soft sand will not. For trenching, such caliche is an impenetrable barrier to all but mechanized equipment. Trenches dug with a backhoe in a thick caliche zone have vertical sides that stand up with little support. Sediments below the caliche, however, are likely to be loose.

In semiarid areas downward percolation of water from rainfall and runoff is inhibited by the presence of caliche layers. Grasses and shrubs in these areas may be sustained by soil moisture from precipitation better than vegetation in areas lacking the caliche at shallow depths. Caliche at depth, however, prevents ground water from rising to the surface. Where caliche is nodular or broken by erosion, gravels of rounded caliche are a common surface lag, whose presence is highly indicative of a caliche layer at some depth. In some areas, such as parts of northeastern Saudi Arabia and southwestern Iraq, thick layers of calcrete have been partially dissolved by rain and ground water and have developed (sinkholes) that can be hazards to cross-country travel.

Appendix 4

NOTICE OF PUBLIC HEARINGS
FOR MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
AND STATE IMPLEMENTATION PLAN (SIP) REVISIONS

Notice is hereby given that the Maricopa County Board Of Supervisors will conduct a public hearing on June 8, 2005 at 9:00 AM on proposed revisions to the Maricopa County Air Pollution Control Regulations RULE 316 (NONMETALLIC MINERAL PROCESSING) and to solicit comments on the submittal of the revisions as a revision to Arizona State Implementation Plan (SIP) for PM_{10}. The Board will also conduct a public hearing on the **RESOLUTION TO SUBMIT SUPPLEMENTAL INFORMATION** on the implementation of Maricopa County Air Pollution Control Regulations Rule 310 (Fugitive Dust) consisting of the **APPLICATION FOR DUST CONTROL PERMIT AND GUIDANCE FOR APPLICATION FOR DUST CONTROL PERMIT** and to solicit comments on the submittal of the resolution as a revision to Arizona State Implementation Plan (SIP) for PM_{10}. The Public Hearings will be held at the Maricopa County Board of Supervisors' Auditorium, 205 West Jefferson Street, Phoenix, Arizona. Call 602-506-0169 for current information. Copies of the final draft rule and the resolution and attachments will be available at least 30 days prior to the hearing for public inspection at the offices of the Maricopa County Air Quality Department, 1001 N. Central Ave. #695, Phoenix, AZ., 85004, phone 602-506-6710, and on the internet at http://www.maricopa.gov/aq/default.asp. A sign language interpreter, alternative form materials, or infrared assistive listening devices will be made available upon request with 72 hours notice. Additional reasonable accommodations will be made available to the extent possible within the time frame of the request. Requests should be made to 602-506-3751 or TTY 602-506-2000.

Publish May 4, 2005 And May 6, 2005.

Appendix 5

AFFIDAVIT OF PUBLICATION

SIP REVISIONS

01

Arizona Business Gazette
The business resource

PO BOX 194
Phoenix, Arizona 85001-0194
(602) 444-7315 FAX (602) 444-7364

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Published: May 5, 12, 2005

STATE OF ARIZONA
COUNTY OF MARICOPA } SS.

Melissa Johnson, being first duly sworn, upon oath deposes and says: That she is the advertising lead of the Arizona Business Gazette, a newspaper of general circulation in the county of Maricopa, State of Arizona, published weekly at Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates indicated.

5/5/2005
5/12/2005

Melissa Johnson

Sworn to before me this
12TH day of
MAY 2005

OFFICIAL SEAL
MARILYN GREENWOOD
NOTARY PUBLIC-ARIZONA
MARICOPA COUNTY
My Comm. Expires May 23, 2007

Marilyn Greenwood
Notary Public

AFFIDAVIT OF PUBLICATION
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Phoenix, Arizona 85001-0194
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NOTARY PUBLIC-ARIZONA
MARICOPA COUNTY
My Comm. Expires May 23, 2007

Marilyn Greenwood
Notary Public

THE RECORD REPORTER

~ SINCE 1914 ~

1505 N CENTRAL AVE #200, PHOENIX, AZ 85004-1725
Telephone (602) 417-9900 / Fax (602) 417-9910

DIANA NINO
MARICOPA AIR QUALITY DIV.
1001 N. CENTRAL AVE., RM. 200
PHOENIX, AZ - 85004-1942

RR# 813177

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05/04/2005, 05/11/2005

RR-813177#

AFFIDAVIT OF PUBLICATION

Reference #:

Notice Type: MCHRG - NOTICE OF HEARING

Ad Description: PUBLIC NOTICE RULE 316 (NONMETALLIC MINERAL PROCESSING)

I, Wendy Cooper, am authorized by the publisher as agent to make this affidavit. Under oath, I state that the following is true and correct.

THE RECORD REPORTER is a newspaper of general circulation published Monday, Wednesday and Friday except legal holidays, in the County of Maricopa, State of Arizona. The copy hereto attached is a true copy of the advertisement as published on the following dates:

05/04/2005, 05/11/2005

Wendy Cooper

Subscribed and sworn to before me on the 11th day of May, 2005

Diane M. Heuel

OFFICIAL SEAL
DIANE M. HEUEL
Notary Public State of Arizona
MARICOPA COUNTY
My Comm. Expires Oct 31 2006

THE RECORD REPORTER

~ SINCE 1914 ~

1505 N CENTRAL AVE #200, PHOENIX, AZ 85004-1725
Telephone (602) 417-9900 / Fax (602) 417-9910

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Diane M Heuel

OFFICIAL SEAL
DIANE M. HEUEL
Notary Public State of Arizona
MARICOPA COUNTY
My Comm Expires Oct 31 2006

RECEIVED

MAY 13 2005

MCESD
AIR QUALITY DIVISION
ADMINISTRATION

Appendix 6

COUNTY OF MARICOPA
State of Arizona

Office of the Clerk
Board of Supervisors

State of Arizona ***)*** ***ss.***
County of Maricopa ***)***

I, ***Fran McCarroll,*** *Clerk of the Board of Supervisors, do hereby certify that the following is a true and correct excerpt from the minutes of the meeting of the* ***Board of Supervisors*** *held on* ***June 22, 2005.*** *These minutes are currently pending approval by the Board:*

RESOLUTION FOR AIR POLLUTION CONTROL RULE 310 FOR ARIZONA SIP

(See attached)

IN WITNESS WHEREOF, *I have hereunto set my hand and affixed the Official Seal of the County of Maricopa. Done at Phoenix, the County Seat, on September 20, 2005.*

Clerk of the Board of Supervisors

cc: *Johanna Kuspert, Air Quality*
File

RESOLUTION FOR AIR POLLUTION CONTROL RULE 310 FOR ARIZONA SIP

As required by 40 CFR 51, Chairman Wilson called for a public hearing to solicit comments on the Resolution to submit supplemental information on the implementation of Maricopa County Air Pollution Control Rule 310 consisting of the Application for Dust Control Permit and Guidance for Application for Dust Control Permit as a revision to (Arizona) State Implementation Plan (SIP) for PM-10. Following the public hearing, the Board is requested to approve the resolution and submit it as a revision to (Arizona) State Implementation Plan for PM-10. This item was continued from the June 8, 2005 meeting. (C8505019000) (ADM2354) (ADM2351-001)

Chairman Wilson asked if anyone wished to address the Board on this matter and 3 speakers came forward to speak in favor of the Air Pollution Control Rule 310.

Jo Crumbaker, Air Pollution Control Department, came forward to speak. She suggested the Board include additional language to the guidance document. She indicated that the changes to the document were to insert the date "June 2005" on the cover page and add language that explains the guidance document. She also commented that the guidance document should be used as a tool for industry to complete dust control applications and that the permits must contain conditions and terms to comply with Rule 310.

Amanda McGinnis, representing the Arizona Chapter Associated General Contractors, came forward to comment in favor of the Air Pollution Control Rule 310 and asked that the Board of Supervisors consider their concerns before approval. Ms. McGinnis asked that the Maricopa County Air Quality Department be cautioned that the guidance document be used to review the dust control applications, not to enforce dust violations. She also commented that not enough credit is given to emission reduction for compliance and asked that disclaimer language be added into this document. She asked that the Maricopa County Air Quality Control inspectors work with the contractors in helping resolve the immediate emission issues and said, "Taking action later does not help the immediate problem and will not help in cleaning-up our air pollution."

Spencer Kemps, representing the Home Builders Association of Central Arizona, came forward to speak. Mr. Kemps said he was in support of the new language, but asked that the guidance document be used as a tool for the application and not be used as a tool to enforce violations.

No protests having been received and after hearing three speakers coming forth at the Chairman's call, motion was made by Supervisor Stapley, seconded by Supervisor Brock, and unanimously carried (3-0-2) to approve the resolution with the suggested amendments outlined by Ms. Crumbaker, and submit it as a revision to (Arizona) State Implementation Plan for PM-10.

RESOLUTION

WHEREAS, the Maricopa County nonattainment area is designated as a Serious Area for particulate matter according to the Clean Air Act and has been granted an extension of the attainment date to 2006; and

WHEREAS, the Serious Area Particulate Plan for PM-10 with an approved extension request is required to include Best Available Control Measures and Most Stringent Measures for significant sources and source categories; and

WHEREAS, Maricopa County committed to research, develop and incorporate additional requirements for dust suppression practices/equipment for construction activities into dust control plans and/or Rule 310; and

WHEREAS, the County has revised the dust control application form that includes the dust control plan and developed a guidance that explains the application form and rule requirements; and

WHEREAS, the dust control application form and guidance must be submitted to the administrator for approval into the SIP to satisfy the Board's commitment; and

WHEREAS, Arizona Revised Statutes 49-406 (G) requires that each agency that commits to implement a control measure describe that commitment in a resolution adopted by the governing body which specifies its authority for implementing the measures as provided in statute, ordinance, or rule; a program for enforcement of the measures; and the level of personnel and funding allocated to the implementation of the measure.

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF SUPERVISORS, MARICOPA COUNTY (BOARD) as follows:

SECTION 1. That the BOARD agrees to proceed with a good faith effort to implement the measure identified in Exhibit A, which is part of this resolution.

SECTION 2. That the BOARD commits to implement the measure as scheduled. Maricopa County also agrees to submit any modification, if necessary, to the technical provisions of the dust control application form and guidance in Exhibit A to EPA for approval as a SIP revision.

DATED this 22nd day of June 2005.

/s/ Chairman Max W. Wilson, District 4

ATTEST:
/s/ Fran McCarroll, Clerk of the Board